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# Poultry Breeding and Production

VOL. I











OLD ENGLISH GAME FOWLS—STREAKY-BREADED ORANGE REDS.  
After an oil painting by Mr. Herbert Atkinson.  
(By courtesy of the Editors of "The Feathered World")



# POULTRY

## BREEDING AND PRODUCTION

By EDWARD BROWN, LL.D., F.L.S.

President of The World's Poultry Congresses 1921, 1924, 1927 ;  
Honorary Past President of the International Assoc. of Poultry  
Instructors and Investigators ; First President of the National  
Poultry Council (England and Wales).

### VOLUME I

#### *RACES AND BREEDING OF DOMESTIC POULTRY*

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## PREFACE

For milleniums, long before the ages of which we have reliable records, Poultry have provided a supply of food for mankind. In a wild state they, the Fowl, were game for the hunter who thus supplied provision for his household. When brought under domestication Poultry assumed a greater importance, even though subsidiary to cultivation of the land and the breeding of larger stock. Their nature made them amenable to control. Often they were members of the family. Not only so, but these species of birds have contributed to the recreation and pleasure of man, whether by the sport of cock-fighting, or by giving play to his creative faculties in respect to evolution of breeds and varieties, or by encouraging the competitive spirit and emulation as expressed in the exhibition system within the last century. The breeding of Poultry makes for that individuality upon which it is based, and which in these later days is threatened to so serious an extent. Whilst limited individually in output, by reason of the small size of body characterising all species of poultry, in the aggregate they have contributed by number and wide distribution to man's nutrition to an enormous extent. There are more poultry under domestication than any other animal or bird. A great branch of husbandry has thus been created. The capacity for further development, by reason of the ever increasing consumption of eggs and poultry, is far in excess of what has already been attained. Poultry Husbandry, however, although simple under primitive conditions in which there is practically no specialisation, is complex in the extreme when operated commercially on a larger scale. As it has progressed problems have arisen which call for the co-operation of scientist and practitioner in seeking for solutions.

From time to time there have been those who, in advance of their day and generation, have visualised the possibilities presented by Poultry Husbandry. In spite of much opposition and contumely on the part of other interests, of neglect by governments and institutions, of lack in fundamental experience, and attempts to work against instead of with Mother Nature, there has been a constant and steady advance during the last three generations. The Author came into active service when the ground had been to some extent prepared, when there was a considerable accumulation of knowledge in breeding

and management of poultry, although small as compared with what has since been attained, and for nearly half a century has devoted himself to this branch of breeding and production. Within that period development has been phenomenal, and in almost every quarter of the globe. The total value of Poultry Husbandry annually cannot be estimated with certitude. It amounts, at least, to hundreds of millions of English pounds sterling every year, and in some countries is greater than almost all other branches of food supplies.

During the long centuries, even down to our own time, Poultry were subsidiary to cultivation and other classes of stock, a side line chiefly in the hands of women, whether under nomadic or more settled conditions. In Chapter I is given a summary of the knowledge we have gained as to the distribution of domestic poultry, a fascinating subject to which the Author has devoted considerable attention for nearly forty years. The information given in that section has been gleaned in many directions, little by little. Gradually the breaks in the chain have been closed. We can now see how that poultry and people are closely associated, and that as the latter have migrated they have carried with them the humble hen, than which there can be no greater proof of her value to mankind. Some reference to the issues thus raised may be quoted from the Author's Presidential Address at the World's Poultry Congress, Ottawa, 1927.

‘An interesting study is, How were laid the foundations of what we see around us? Briefly stated, there has been a constant growth of experience. The distribution of poultry as a result of migration of peoples, of conquest, of intercourse and of commerce, and also a craving for sport or for higher standards of living, have made for advancement. In later decades there has been an ever increasing pressure in respect to food supplies. To these changes Nature has been wonderfully responsive. It would seem as if throughout the centuries the cry of Browning had been anticipated: “Make no more giants, God, but elevate the race.” Broad and deep and widespread are the foundations of modern poultry husbandry. At our command is the inherited accumulation of the wisdom and experience of the ages. Throughout many areas of Europe, Asia, and Northern Africa, poultry breeding and production have been practiced for from 2,000 to 3,000 years, and with a considerable degree of what may fairly be termed the scientific spirit. Some of the much heralded methods which have been widely adopted within the last generation, claiming to be new



discoveries, are merely revivals of what was known long ago. This fact is not mentioned to minimise the service of those who have rediscovered such systems. It is to indicate that there are vast reserves of knowledge yet to be drawn upon. Professor J. A. Thomson has said that "much of the practical lore is thoroughly scientific, though it has never been stated." Progress may have appeared slow, but all the time there has been evident a striving for greater knowledge, for discovery of better methods.

With the rise of industrialism and commerce in the Western nations there came about aggregation of population in urban and semi-urban areas, which has led to a fundamental change. Production must necessarily advance to a greater extent than known before. These massed peoples were and are almost entirely dependent upon others for their food supplies. As number of inhabitants increased, and especially as intercommunication became more rapid, the range of supplies was widened. Not only so, but under congested conditions, and where the physical activity was reduced almost to extinction, or limited to a few muscles, the demand arose for nutrition finer in quality, more easily digested and palatable than the heavy meats of former days. The effect of these changes are seen in an ever increasing consumption of eggs and poultry, the former of which are among the four or five articles of diet which contain minute and elusive elements that are now recognised as essential for growth and health, and are protective in their influence for combating disease. Not only so. Poultry by their small size of body, and rapidity of reproduction, as well as prolificacy, can be kept by the smaller occupier, even by the denizens of our great centres of population and industrial districts. Poultry Husbandry affords an opportunity for improving the conditions of life of multitudes of people of all sections of the various communities. As a result there has grown up a pursuit of wide reaching influence. In addition to farmers, who, either by their own efforts or that of their wives and daughters, have always been and are the main sources of supply, the improvement of breeding stock, and specialisation in production of eggs and poultry as a commercial proposition, as well as keeping of poultry by amateurs and cottagers and urban residents, have, in combination, created one of the great branches of husbandry, with vast possibilities for further extension. There are more of the world's inhabitants interested in Poultry Husbandry in its various branches than in any other form of domesticated live stock.

As set forth in the address already referred to, 'In several districts and countries where there are dense populations, ten thousand fowls are found where one existed in former days. Among some of the older nations this advance is less apparent. They had already gone far ahead. As a result of increase of numbers fresh problems are presented. Not a few of these are due to what an American writer has described as "a passion to see immediate results which the thoughtless ever confuse with achievement." Poultry keepers have learnt by painful experience that Nature has periodically to be reckoned with; she wants time, and her own time. Great changes cannot be produced quickly. Every success we have gained has been founded on our failures. Remember what the great scientist, Lord Kelvin, once said to his students: "Gentlemen, when you are faced with a great difficulty, you may be on the verge of a great discovery." That there has been great progress is indisputable, chiefly, however, as a result of practical breeding and production. Those concerned have often risked their all in a great adventure, or, by quiet persistence, have attained their object. These laid the basis; they blazed the trail. Ultimately there came organised breeding and production, and an unmeasured service in this direction has been rendered by exhibition breeders, to whom we are indebted for racial advancement in respect to poultry. In addition is the great stimulus given to cultivation, more especially where fertilisers are essential, of enormous value to those who live upon the land. Poultry are an addition to and not a displacement of other stock and produce. Thus the gain is much greater than represented by poultry alone.

'Not a few can recall the time when the pioneers of the poultry industry were derided and ignored, when to be a poultryman was thought to be the last resort of the incompetent or the indolent. The day of that has passed for ever.

'When the history of poultry husbandry is written, the first quarter of the twentieth century will be notable for the formation of an association of scientists with practical breeders and producers. Thirty years ago experimental work and research in poultry were unknown, save in minor directions. In 1895 teaching in this subject had been commenced at Reading, England, as it had been at Gambais, France, some time previously. Shortly afterwards the Rhode Island College (Kingston, R.I., U.S.A.) followed suit. The time of research had not then been reached. On the other hand, scientists saw no career in



this field ; on the other hand, breeders and producers of poultry failed to realise the imperative need for research. Happily, that condition of affairs has in large measure passed.'

Poultry History is strewn with the wrecks of abandoned theories. Hence the importance of bringing into the keeping of poultry intelligent men and women within more recent years, those who are capable of exercising the open mind, of taking the wider views, of adopting business principles. Such are more and more required in view of the ever widening opportunities presenting themselves in practically all countries.

Consequent upon the developments which have been briefly indicated, the governments of nearly all civilised and progressive countries have recognised their responsibility in connection with instruction and investigation, and, to a lesser extent, in regulations for sale of produce. Colleges and institutions associated with agriculture, in many instances now regard poultry husbandry as an important sphere equally to themselves and their constituents, and accord to those engaged as instructors or research workers in this subject the same status as their colleagues. In this direction a tribute is paid to Canada and the United States for leading the way. Most notable is the fact that a considerable number of leading scientists have entered into the field of research in connection with the multitudinous problems, ever increasing in importance and interest, which are presenting themselves to those who are engaged in Poultry Husbandry.

Recognising from the outset that knowledge and experience in this subject are restricted to no country or race, and that everyone of these has some contribution to make, either in breeds of poultry or methods of production, the Author has, as far as opportunity permitted, studied the subject in many countries from as far back as 1879. The journeys undertaken have included nearly the whole of Europe from Russia and the Balkan States westward, and North America from the Atlantic to the Pacific, from Hudson Bay to the Gulf of Mexico. These volumes embody observations made and experience gained over this wide field, together with the results as recorded by others. Previous works, now out of print, have been drawn upon after careful revision. Much is presented that is new. In this manner an endeavour has been made to link the past and the present.

The object striven for has been to submit knowledge upon the

subject which has been proved by practice. Consideration, however, must at all times be given to variations which are in accordance with different environment, in itself a most important factor. Practice must be varied in conformity with conditions, even though there are fundamental principles which are general. Poultry Husbandry is characterised by great diversity. Here are indicated how breeds may fit into and conform with methods of breeding and management, as well as climate and soil, how far such breeds may attain perfection and higher productivity, leading to greater profit, and thus advancing the welfare of mankind.

Wider and greater experience will, undoubtedly, open out new fields and extended opportunities. There are, in addition, the ever increasing problems presented as a result of domestication and of more intensive methods. Such are largely speculative and experimental upon which more light is needed. These demand constant exploration and study. They are not, however, the immediate task of the general keeper and breeder of Poultry until the scientist and the student have farther advanced in their investigations. Any conclusions arrived at must stand the test of practice on the side of production. In this respect are what may be termed the principles of breeding, together with a study of the different races of poultry and their values; the evolution of new breeds and varieties, either to take the place of those which have become exhausted, or by presentation of new, possibly better, forms; the relationship of exhibition to productive stock, in which are involved the application of standards; and the diversities which from time to time make their appearance.

The endeavour in preparation of these volumes has been to render service to every grade of those who are engaged in Poultry Husbandry whether their operations be large or small. They contain the experience of a life time, and that of many others, in an attempt to conserve and perpetuate what was valuable knowledge in former days, with later developments which are demanded by greater opportunities and changed conditions. These have transformed Poultry Husbandry into a pursuit of great magnitude and wide-reaching influence, one which is now yielding notable rewards to those engaging in it, and who possess the qualifications of skill and earnest endeavour.

EDWARD BROWN.

*January, 1929.*



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## CHAPTER I

### ORIGIN, HISTORY, AND DISTRIBUTION OF DOMESTIC POULTRY.





## CHAPTER I

### ORIGIN, HISTORY, AND DISTRIBUTION OF DOMESTIC POULTRY.

THE first civilisation of man was Asiatic, which fact explains why so many species of domesticated animals have been derived from that eastern continent. Man in the primitive state lived by hunting and shooting, migrating as necessity demanded to follow the supply of food. Increase of the human population was, under those conditions largely determined by the number of animals and birds within his reach. He existed principally upon the flesh of those creatures which could be trapped or killed. Cultivation of the soil was adopted at a later period when settlements had been formed. That is, also, true of sports such as cock-fighting as referred to in succeeding chapters. These contributed to his food to a limited extent.

At what period in human development man first brought wild poultry into subjection we have no direct evidence. Probably it was long after horses and cattle had been tamed. It is, however, clearly shown in the Old Testament Scriptures that the earlier developments were when the ancients became owners of flocks and herds, a mobile form of live stock suited to the needs of wandering tribes. 'The Aryans, when they entered India, were almost entirely a pastoral people, whose wealth consisted in their cattle, and who looked on agriculture as degrading.' (1) It was not until the imperative need for mutual protection, or the pressure of increasing population, or the exhaustion of natural food supplies within their range, had made the continuance of a nomadic life almost impossible, which led to the establishment of village settlements in the first place, and to towns and cities in the second, that poultry of various species were domesticated.

## 2 POULTRY BREEDING AND PRODUCTION

Under such conditions the food supply became a prime factor. Cultivation of the land and domestication of smaller animals and birds, by reason of their edible value, followed in due course. How this was accomplished is an interesting study. There is a deep and interesting vein of truth in Rudyard Kipling's 'Just-so-Stories,' telling how that the animals received in return for sacrifice of their liberty, comfort, food and protection. Ultimately there came about control with selection in mating and breeding. In process of time the greater requirements of growing numbers of consumers and higher standards of life eventuated in the adoption of new methods. With fixed habitations food must be produced at or be brought to the homes of the inhabitants. So far as poultry were concerned, domestication was comparatively easy, either by capture of the parent stock, or by taking alive the birds when young, and, later, by securing eggs from the wild birds' nests and hatching these by means of the specimens already tamed. In certain species the wild instincts can be subjugated quickly, and the progeny induced to accept the new conditions. It is, therefore, with this summary of facts before us that we approach a consideration of the origin of the various species of poultry.

### FOWL.\*

Genus : Galli.

Nomenclature : *English*, Fowl ; *French*, Volaille ; *German*, Geflügel ; *Dutch*, Hoender ; *Italian*, Pollame ; *Spanish*, Gallidos ; *Danish*, Honse ; *Hungarian*, Fajlak ; *Russian*, Ptitsa domashni.

Considerable study has been given to the origin of the domestic fowl. For a time the opinion of the late Professor Charles Darwin to the effect that all our domestic fowls are derived from one stock—the *Gallus Bankiva*, or *ferrugineus*, the jungle fowl of India—found almost universal acceptance. More recently doubts have been thrown upon that view. The question is still in a state of uncertainty, and in the absence of fuller evidence is likely so to remain. It may be accepted, however, that the majority of breeds of the fowl are descended from the wild-fowl named above, and that it originated in Eastern and Southern Asia.







Naturalists recognise four members of the genus *gallus*, as follows: (1) the *G. Sonneratii*, which is found in the more southern districts of India. At one time it was thought to be the ancestor of our domestic breeds. The last named, however, do not exhibit, so far as seen, any of its peculiarities, and no one now accords it that position. (2) The *G. Stanleyii*, only found in the island of Ceylon. Excepting the colour of the comb, this genus resembles the domestic fowl to such a degree that some naturalists were at one time inclined to regard it as the parent species. It has, however, a singularly different voice, unknown in any breed of domestic fowl. Attempts to cross the species with the ordinary fowl made in Ceylon, and such crossing is the supreme test, failed to indicate interrelationships. (3) The *G. furcatus*. This species inhabits Java and the islands eastward as far as Flores. It is, however, so different in many characteristics from the tamed species that no one regards it as the parent of any known race of fowl. It has green plumage, an unserrated comb, and a single median wattle. (4) The *G. ferrugineus*, or *Bankiva*. Of this species Darwin (2) says: 'It has a much wider geographical range than the three previous species. It inhabits Northern India as far west as Scinde, and ascends the Himalayas to a height of 4,000 feet; it inhabits Burmah, the Malay Peninsula, the Indo-Chinese countries, the Philippine Islands, and the Malayan Archipelago as far eastward as Timor. This species varies considerably in the wild state. The wild *G. Bankiva* agrees most closely with the black-breasted game breed in colouring and in all other respects, except in being smaller and in the tail being carried more horizontally; but the manner in which the tail is carried is highly variable in many of our breeds. It is a significant fact that the voice of both male and female *G. Bankiva* closely resembles, as Mr. Blyth and others have noted, the voice of both sexes of the common domestic fowl, but the last note of the crow of the wild bird is rather less prolonged.' He adds that chickens from eggs of the wild stock are easily tamed, that in the Philippine Islands the natives keep wild cocks to fight with their domestic fowls, but that specimens of the *G. Bankiva* brought from countries east of the Bay of Bengal are more easily tamed than those of India, and adds, 'if we suppose that the *G. Bankiva* was first tamed in Malaya and afterwards imported into India, we can understand the observation made to me by Mr. Blyth,



that the domestic fowls of India do not resemble the wild *G. Bankiva* of India more closely than do those of Europe.'

It would appear evident from the tone of Darwin's works that he realised the somewhat slender evidence in support of the theory that the domestic fowls are all descended from one species, for he says (p. 251): 'We have not such good evidence with fowls as with pigeons of all the breeds being descended from a single primitive stock. In both cases the argument of the fertility must go for something; in both we have the improbability of man having succeeded in ancient times in thoroughly domesticating several supposed species—most of these supposed species being extremely abnormal as compared with their natural allies—all being now either unknown or extinct, though the parent form of no other domesticated bird has been lost.' The remarkable variations in poultry formed within comparatively recent times led the great naturalist to the opinion that all fowls had come from one progenitor.

Poultry breeders have not accepted wholly this opinion, at the same time recognising their own limited observations. In the *Field* newspaper of September 26th, 1885, appeared an important communication from the pen of the late Mr. W. B. Tegetmeier, F.Z.S., who was at once a poultry breeder and a naturalist. He was an associate of Darwin in some of his researches. In this he said:

'It may be regarded as most presumptuous in me to dare to contest the conclusions arrived at by the honoured master Darwin, with whom and for whom it was for some years my privilege to work; but a careful and extended consideration of the facts has led me to a different conclusion to that arrived at by him. That the domesticated fowl in India is derived from the first species (*G. ferrugineus*) is evident from the fact that sportsmen constantly confound the wild and the tame birds.

'Last season (1884) at the Zoological Gardens, numerous half-bred birds were reared from *G. Stanleyii*, and in former years many were bred from a single specimen of *G. furcatus*. There is no doubt that the several wild *Galli* will interbreed and produce fertile offspring as readily as do the corresponding and closely allied pheasants, in which the three species—the Chinese, the Versicolour, and the Colchical—have become so mixed that pure birds are rarer than mongrels. I have no doubt



in my own mind that the wild Galli have intermixed in not a few instances, and perhaps through not a few centuries, in producing our domestic breeds.

‘ But it is with regard to the Eastern Asiatic type of fowl (absurdly known as Cochins and Brahmas) that my doubts as to the descent from the *G. furrugineus* are strongest. We have in the Cochin a fowl so different from the ordinary domestic birds that when first introduced the most ridiculous legends were current respecting it. Putting these on one side, we have a bird with many structural peculiarities that could hardly have been induced by domestication. Thus, the long axis of the occipital foramen in the Cochin is perpendicular, in our old breeds horizontal, a difference that could never have been bred for, and which it is difficult to see could be correlative with any other change. The same may be said respecting the deep sulcus or groove up the centre of the frontal bone. The extraordinary diminution in the size of the flight feathers and that of the pectoral muscles could hardly have been the result of human selection and careful breeding, as the value of the birds as articles of food is considerably lessened by the absence of flesh on the breast. Nor is the extreme abundance of fluffy, soft body feathers a character likely to be desired in a fowl. The vastly increased size may have been a matter of selection, although, as the inhabitants of Shanghai feed their poultry but scantily, and, according to Mr. Fortune, mainly on paddy or unhusked rice, it is not easy to see how the size of the breed was obtained if, as is generally surmised, it arose from the little jungle fowl.

‘ Taking all these facts into consideration, I am induced to believe that the birds of the Cochin type did not descend from the same species as our game fowl. It may be asked what I would suggest as the origin of these Eastern Asiatic breeds. In reply I would suggest the possibility, or even probability, of their being descended from some easily captured and really domesticated short-winged species that may have entirely passed into a state of domestication, as has the camel and the horse. I can see no inherent impossibility in this suggestion, nor any fatal objection to the theory I have advanced.’

There is one important point which is not referred to by Mr. Tegetmeier, namely, that no matter how great the divergencies in the breeds referred to from the others of a more general type, these do

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not affect interbreeding to the slightest extent. That is true even with the most abnormal races such as the Japanese Bantam. Moreover the progeny of these crossings are fertile in the extreme. The Cochin and the Game, the Brahma and the Dorking, and all intermediary types can be mated together without any doubt as to the fertility of the crossed progeny. This fact would indicate that these are not hybrid, that the parents are of the same species, and that there must have been a common ancestry even though that was very remote. In this respect we are dealing with breeding and selection, natural and artificial, extending over more than three thousand years. How far the structural variations referred to by Mr. Tegetmeier could be influenced by prolonged change of conditions is a question that cannot be determined by any direct evidence.

We have, therefore, arrived thus far, namely, that there is more than a doubt in the minds of naturalists, for Mr. Tegetmeier is supported by others, as to the theory advanced by Darwin. Apparently we must go much farther back to find a common progenitor, one, maybe, that was the parent of all the four species of *Galli* that have been named. It is of interest to note that this view was first advanced by a poultry breeder, not a naturalist. In the first edition of Wright's "Book of Poultry" (3) it was stated that "There are tendencies in some of our domestic breeds which are certainly not due to the *G. ferrugineus*, and which, as they are found in the *G. furcatus*, are probably the result of natural rather than artificial development, a conclusion which is strengthened by the fact that another feature of *G. furcatus*, not usually found in the domestic breed most resembling it, still appears occasionally by reversion in that same breed. Hence, we are disposed to think that the original type can only be found still further back; that it diverged into various subtypes, including the four wild breeds still known, and developed through the *G. Bankiva* into the Games, while other breeds were reached through collateral branches, now either extinct or possibly still further modified into the present three known races. It is possible enough that some other wild species or variety of greater size than any now known may have either disappeared or become degraded."

To sum up, therefore, it may be assumed that with the domestic fowl, as with other natural forms of life, we can go so far back, but no



further. The probability is that, as in the case of dogs, all the breeds of fowls do not owe their origin to any one species, at any rate of those now extant, and that we must look to another progenitor than the *G. ferrugineus* for several of the later introduced races, more especially those from China, characterised as these are by structural variations.

## DUCK.

Genus : *Anas boschas*.

Nomenclature : *English*, Duck ; *French*, Canard ; *German*, Enten ; *Dutch*, Eenden ; *Italian*, Anatre ; *Spanish*, Patos ; *Danish*, Aender ; *Hungarian*, Kacsá ; *Russian*, Utka.

The evidence is conclusive that the majority of breeds of domestic ducks have descended from the mallard, or wild duck, which is widely distributed, ranging from Eastern Asia to North America, and is a regular visitant in all parts of the Northern Hemisphere. At the same time it is true that of those known in Europe and America several have been imported from Asia, where domestication took place at a much earlier period. As already referred to, breeding and selection were adopted long in advance of Europe. Until later centuries these distant countries were little known and intercommunication was very limited and slow. As a consequence development in each country was more individual than is now the case. When and how such domestication of the duck first took place in Europe it is difficult to say. Certainly it was before the Christian Era, for Columella, who lived in the first century and wrote upon animal husbandry, says that, 'when anyone is desirous of establishing a duckery, it is a very old mode to collect the eggs of teal, mallard, etc., and to place them under common hens ; for the young thus hatched and reared cast off their wild tempers, and undoubtedly breed when confined in menageries. For if it is your plan to place fresh-caught birds that are accustomed to a free mode of life in captivity they will be slow breeders in a state of bondage.' He further says that the places in which they are kept should consist of high walls, covered in to prevent their flying away. That is proof of partial domestication, as it could scarcely be expected that they would be tamed in the first generation. It is evident, however, that some species of animals and birds, of which the different species of poultry are leading examples, have not the wild nature

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so highly developed as is the case with others, and that they are more easily tamed.

Dixon who, whilst a most interesting writer, was in many cases superficial, states (4) that he is inclined 'to consider our race of farm-yard ducks as an importation, through whatever channel, from the East, and to point out the discovery of the passage of the Cape of Good Hope (1493) as the approximate date. The early voyagers speak of finding them in the East Indies exactly similar to ours, and the transmission of a few pairs would be a much easier task than to subdue the shyness and wildness of the mallard.'

In all probability such importations took place in the fifteenth century, as they have later, and thus new races were introduced into Europe. The evidence, however, given by Columella as above indicates that long before the time named domestication had taken place in Europe. This is confirmed by Hehn (6) who states that the duck was not imported from Asia in the early periods but had been domesticated from the wild stock, at any rate in eastern and southern Europe.

Mr. Dixon further says: 'I know of no instance in which anyone has finally succeeded in founding a permanent tame farmyard race of ducks by breeding from the mallard.' This is not to be accepted, for the late Mr. Edward Hewitt described (5) his attempts to breed wild ducks upon a pond or lake near his residence. The eggs were taken from a wild bird's nest and hatched under an ordinary duck. 'Until a month old we "cooped" the old duck, but left the youngsters free. They grew up invariably quite tame, and bred freely the next and following years. There was one drawback, however. Although not admitted when grown up to the society of tame ducks, they always in two or three generations betrayed prominent marks of deterioration; in fact, they became domesticated. The beautiful carriage of the wild mallard and his mate, as seen at the outset, changed gradually to the easy, well-to-do, comfortable deportment of a small Rouen, for they, at each reproduction, became much larger.' Mr. Hewitt made several experiments of this nature with the same result, in some cases white feathers appearing in the wings.

What is here stated is confirmed by the conclusions arrived at by the late Professor Charles Darwin, who said that (2) 'almost all



naturalists admit that the several breeds are descended from the common wild duck (*Anas boschas*); most fanciers, on the other hand, take, as usual, a very different view. Unless we deny that domestication, prolonged during centuries, can affect such unimportant characters as colour, size, and, in a slight degree, proportional dimensions and mental disposition, there is no reason whatever to doubt that the domestic duck is descended from the common wild species, for the one differs from the other in no important character. We have some historical evidence with respect to the period and progress of the domestication of the duck. It was unknown to the ancient Egyptians, to the Jews of the Old Testament, and to the Greeks of the Homeric period. . . . The origin of the domestic duck from the wild species is recognised in nearly every language of Europe, as Aldrovandi long ago remarked, by the same name being applied to both. The wild duck has a wide range from the Himalayas to North America, and the crossed offspring are perfectly fertile. Both in North America and Europe the wild duck has been found easy to tame and breed.'

Also the great naturalist calls attention to a striking peculiarity, (2) namely, that 'in the great duck family one species alone—the male of *A. boschas*—has its four middle tail feathers curled upwardly. Now, in every one of the above named domestic breeds these curled feathers exist, and on the supposition that they are descended from distinct species, we must assume that man formerly hit upon species all of which had this now unique character.'

Darwin, in the work referred to, gives a large amount of interesting information showing the universal resemblances between the mallard and races of domesticated ducks, with such variations as would result from changed conditions and the increased and decreased use of the limbs. With reference to what he states as to the opinions of fanciers differing from those of naturalists, this is explainable by the fact that the latter think chiefly of the species, whereas the former are concerned with breeds and varieties. Variations in external characters are so important to breeders that they are disposed to exalt their value far above the immediate. These, however, are secondary, and can be produced with comparative ease. The one serious argument in favour of non-relationship between the wild and tame races of ducks is that the former are monogamous and the latter polygamous.

That is a matter of habit, and is insufficient to weigh against the mass of evidence in the opposite direction. Great though the variations in tame ducks, most of all in the ornamental races, we accept the contention that the mallard is parent of all our domesticated breeds, and that such domestication has taken place both in Asia and Europe. As to other Continents there is no evidence.

### GOOSE.

Genus : *Anser cinereus*.

Nomenclature : *English*, Goose ; *French*, Oie ; *German*, Gänse ; *Dutch*, Gansen ; *Italian*, Oche ; *Spanish*, Ocas ; *Danish*, Goes ; *Hungarian*, Ludak ; *Russian*, Güs.

Unlike the fowl and the turkey, neither of which is indigenous to Europe, the former originating in Asia and the latter in America, the goose in its wild state is a denizen of Asia, Europe and North Africa, which fact explains much in relation to it. Members of the same family are known in other parts of the globe. Hehn (6) indicates that references to the goose are found in Sanskrit writings, and says that 'it would be rash to conclude from this that the goose was a tame domestic animal among the primitive Aryan stock before the great migration. It was doubtless well known and much sought after on the lakes and streams and in the swampy lowlands, as it is now among the nomads and half-nomads of Central Asia. Where it is still abundant and easy to obtain there was no necessity for breeding it artificially in confinement ; and so long as men's manner of life was unsettled, a bird that takes thirty days to hatch and a proportionate length of time to rear its young was unsuitable to the economy of a pastoral people. But when comparatively stationary settlements were found on the shores of lakes, the young birds could easily be fetched down from their nests by boys, have their wings clipped, and be brought up in the households ; if they died, the attempt was repeated until it finally succeeded, especially as the wild goose is, comparatively speaking, one of the easiest birds to tame.' Not only has the goose been valued for its flesh qualities, but also that when the stage of human comfort had been reached in respect to beds and cushions, its feathers and down were extensively used in that manner, and for many centuries the quills were employed for making pens.

The wild goose, called the Greylag (*Anser ferus*), is distributed



all over Europe. It conducts its young to the shores of the Mediterranean Sea, both north and south, breeding, however, in the colder latitudes. It is, therefore, migratory. Other less known forms are found in Asia and America.

Of wild geese the species known are the Greylag, already mentioned, the Bean, the White-fronted or laughing goose, and the Pink-footed. The conclusion is that all European breeds are descended from the Greylag, which at one period bred extensively in the fen districts of Eastern England. Since the drainage of those areas it has been compelled to find a location elsewhere. In Scotland, both on the mainland and in the western islands, it is found, and also in Ireland where the conditions for breeding are favourable. The Bean goose is more common, and large numbers of the White-fronted goose arrive as soon as the winter sets in on the Continent of Europe. Between the Greylag and the Bean are resemblances which are apt to mislead. At one time it was suggested that the Chinese goose was of a distinct species to the Greylag. Mr. Blyth testified that the two breed together, and that their progeny were fertile. His opinion was that the common goose of India was a hybrid between these types. The evidence is almost entirely in favour of the opinion that the origin of the domesticated goose is to be found in the Greylag. The method of domestication, so far as we are aware, is not recorded, except as stated, but it would either be by securing eggs for hatching or young birds from the nests of wild parents.

Attention is drawn by Charles Darwin to the small amount of variation between the wild and domestic geese. He writes (2): 'Although the domestic goose certainly differs somewhat from any known wild species, yet the amount of variation which it has undergone, as compared with that of most domesticated animals, is singularly small. This fact can be partially accounted for by selection not having come largely into play. Birds of all kinds which present many distinct races are valued as pets or ornaments. No one makes a pet of a goose; the name, indeed, in more languages than one is a term of reproach. The goose is valued for its size and flavour, for the whiteness of its feathers, which adds to its value, and for its prolificness and tameness. In all these points the goose differs from the wild parent forms; and these are the points which have been selected.'

One other distinct gain from domestication of the goose is the increase in size of body, and this is noticeable in nearly all birds and animals which have adapted themselves to the altered conditions of life, and to the greater certainty of food which follows, except where selection has specially been for diminution of stature. It is also true that more eggs are produced by the tame goose than by her wild sister.

## TURKEY.

Genus : *Meleagris*.

Nomenclature : *English*, Turkey ; *French*, Dindon ; *German*, Truthühner ; *Dutch*, Kalkoenen ; *Italian*, Tacchini ; *Spanish*, Pavos ; *Danish*, Kalkun ; *Swedish*, Kalkon ; *Hungarian*, Pulyka ; *Turkish*, Indian ; *Russian*, Indiukh.

The scientific name given to the Turkey, *Meleagris*, is explained by the fact that when first introduced into Europe the species was not recognised as entirely new, even though it was unknown in the Eastern Hemisphere prior to the discovery of America by the Spaniards under Christopher Columbus. The Greeks and Romans called what appears to be the guinea fowl by the name of *Meleagrides*, or *Gallinae Africanae*. When the explorers of the western main returned from their voyage of discovery of the New World, it was at first thought that the turkey, brought back with them, was of that species, possibly that it had been obtained in Africa.

Belon, the French naturalist (1553), is credited with being the originator of the erroneous classification, which is doubtful, as it was known for more than half a century before the year named. Linnaeus followed him, and it is now universal. The term *Meleagris Gallipavo* reveals the fact that the turkey was thought to be allied to the guinea and the domestic fowl. Scientific names, however, are often as misleading as are breed designations.

It is generally accepted by naturalists that the domesticated turkey has descended from the wild species found in Mexico and Central America (*M. Mexicana*), which is certainly correct so far as the earlier forms are concerned. It would appear that the modern American breeds own as ancestors the race found in the United States and Canada (*M. Americana*). The introduction of wild blood has been frequently resorted to in order to secure enhanced size. Owing to the gradual occupation of the country the number available is being



steadily reduced, though there are sections in which it is still to be found. From the evidence available it would appear that the turkeys imported from America in the sixteenth century were largely black in plumage, thus closely following the Mexican, which explains why so many of the European breeds are black, wholly or partly, or sports therefrom ; whereas the later importations have been bronze, which colour is characteristic of the wild American turkey.

Darwin says (2) that 'F. Michaux suspected in 1802 that the common domesticated turkey was not descended from the United States species alone, but likewise from a Southern form ; and he went so far as to believe that English and French turkeys differed from having different proportions of the blood of the two parent forms.' The fact that these wild males have, since Darwin wrote, been used much more freely for breeding is further proof of their relationship. It may safely be accepted that the two forms are varieties of the same species. Other species of turkeys are to be met with in America, such as the Honduras and the crested turkey of Mexico, but these do not appear to have been amenable to domestication.

That the turkey had been domesticated by the aboriginal inhabitants of America before its discovery by the Spaniards is certain. In some of the nations then revealed to the Eastern world was a considerable measure of civilisation. Prescott says (7) that 'the Spaniards saw immense numbers of turkeys in the domesticated state on their arrival in Mexico, where they were more common than any other poultry. They were found wild, not only in New Spain, but all along the continent, in the less frequented places, from the North-Western territory of the United States to Panama. The wild turkey is larger, more beautiful, and in every way an incomparably finer bird than the tame.' And, further, speaking of the City of Mexico when Cortes first entered the capital, 'no less than 500 turkeys, the cheapest meat in Mexico,' were allowed for the feeding of the vultures and eagles kept in the Royal aviaries.

A French writer (8) says : 'Oviedo spoke, in 1526, of a species of Gallipavo (peacock) domesticated in New Spain, bred in that country by the Christian colonists, and which probably were embarked on the ships leaving for Europe.'

Other writers have stated that it had existed under domestication

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for centuries when the Spaniards conquered Mexico. Rene de Raundonniere reports to have found them on landing in North America (1564), and twenty years later they were discovered in Virginia. As the North American continent was opened up, travellers found the wild turkey as a denizen of the woods and forests. Thus the origin of the species can be traced from the landing of Columbus in the western world without difficulty.

Acting upon our request, some years ago the Count de las Navas, at that time librarian at the Royal Palace, Madrid, and whom we had the pleasure of meeting when on a visit to that Capital, made researches which show that the first importation of the turkey into Europe was in 1500. The following quotations are from a work entitled "The Zoology of Columbus and the First Explorers of America," by Juan de Arcenas, published at Havana in 1888 :

' It is usually asserted that the turkey was first found in Mexico, and that, on the whole, it was a stranger to South America. But both assertions are incorrect. Pedro Nino was its discoverer, on the coast of Cumana, north of Venezuela, on the voyage made by him in 1499. He bought some from the Indians at the rate of four glass beads for each fowl. It is certain that in 1500, on the return of this fortunate expedition to Bayeria, in Galicia, besides the monkeys, parrots, and other curiosities (including a great quantity of pearls) collected by Nino in America, turkeys were seen for the first time on European soil.

' There is no mention of them on the other side of the Orinoco ; we may therefore take the course of this river as the limit of this breed on the Atlantic side of South America. On the Pacific side they reached as far south as the borders of Peru. In 1502 Columbus found "very large fowls," with feathers like wool, in the island of Guanaja, the easternmost of the Ruatan group, off the coast of Honduras, which was known in early times under the general name Guanajan Islands. He also found them in Honduras, and in every part of the coast up to the Isthmus. They must have been introduced into Cuba between the year 1511, when Cuba was conquered, and 1517, when Yucatan was discovered. The name Guanaja, which is given to the bird in Cuba, is sufficient indication of its origin in the Guanaja Islands, whither frequent expeditions were then sent in order to obtain Indian slaves, who were also called Guanajos. It is known that one of the expeditions



to these islands, commanded by Fernandez de Cordoba, landed in Yucatan ; this was the original conquest of Mexico.

‘ Throughout New Spain this bird was very common. The Indians bred it in their households, and there were always several millions in Montezuma’s palaces, which were used to feed the birds, snakes and other animals that were there. There was also a wild species in the country. Their general name was *totolui*, the hen *cibuatslui*, the cock *buexoloth*.

‘ From Mexico the turkey was carried to Europe, and, also, apparently, to San Domingo, for Oviedo made the mistake of thinking that this country was its sole place of origin. He describes it as widely distributed in 1525, in the Auh’las and Costa Jinue, and says that he himself had the opportunity of seeing it in Nicaragua and other places.’

Valuable though the above information is, there is an evident exaggeration in some directions as to numbers, and later observations do not confirm the width of distribution in respect to the Mexican turkey, which was undoubtedly the origin of European breeds. As distinction between the various species of turkeys known now was not made, the southern races were undoubtedly the Honduras and others.

In size the wild turkey, and especially the American species, is much larger than those found under domestication. Males have been shot during recent years weighing up to 60 pounds. These were old birds. The largest we have seen among tame specimens was 47 pounds. It had, however, been specially fed. The general average of the best birds in ordinary condition is not more than half the last named weight. Many others do not exceed 15 to 20 pounds when two to three years old. Decrease in size may be attributable to loss of vigour as a result of changed conditions, probably to limitation of exercise equally in wings and legs. A principal cause, however, is the use of immature stock for breeding under domestication. Turkeys do not attain their maturity until they are three to four years old. Further, selection is for medium rather than very large size, as huge specimens are not suitable for ordinary farm purposes.

As already mentioned, with the settlement of North America and enclosure of open land the number of wild turkeys is gradually being reduced. Hence the source of supply in that direction is narrowing, and breeders will be compelled to depend upon our present stocks.

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Fortunately the distribution of the species is very wide, and it has fully adapted itself to domestication.

The names given to the turkey vary considerably, as shown above. The French term is derived from that of the hen turkey, *dinde*—*d'indon*, or of India—as is the case in most European countries. The original explorers were seeking to reach India, hence the name given to the West Indies. The English name is thus explained by Hehn : (6) 'At the beginning of the sixteenth century "Turkish" only meant foreign, or come from over the sea ; at that time geographic ideas were too indefinite to distinguish exactly the West from the East Indies, and both from the land of the Turks.' Merchants trading abroad, especially to Spain and the Orient, were called Turkey merchants. It is thus easy to see how the name was applied, if, as was the case, the earliest birds were brought from Spain by ships calling at Cadiz on their way back from the Orient, possibly without stating where these had been obtained. Such was the reason why Dr. Samuel Johnson and others assumed that this class of poultry had come from Turkey.

In respect to the distribution of the turkey little need be said. From Spain, where it was first brought into Europe, it passed into Britain and France, supplemented at a much later period by direct importations from North American colonies, and by the Netherlands and Italy, which countries were in very close association with Spain, to other parts of the Continent of Europe.

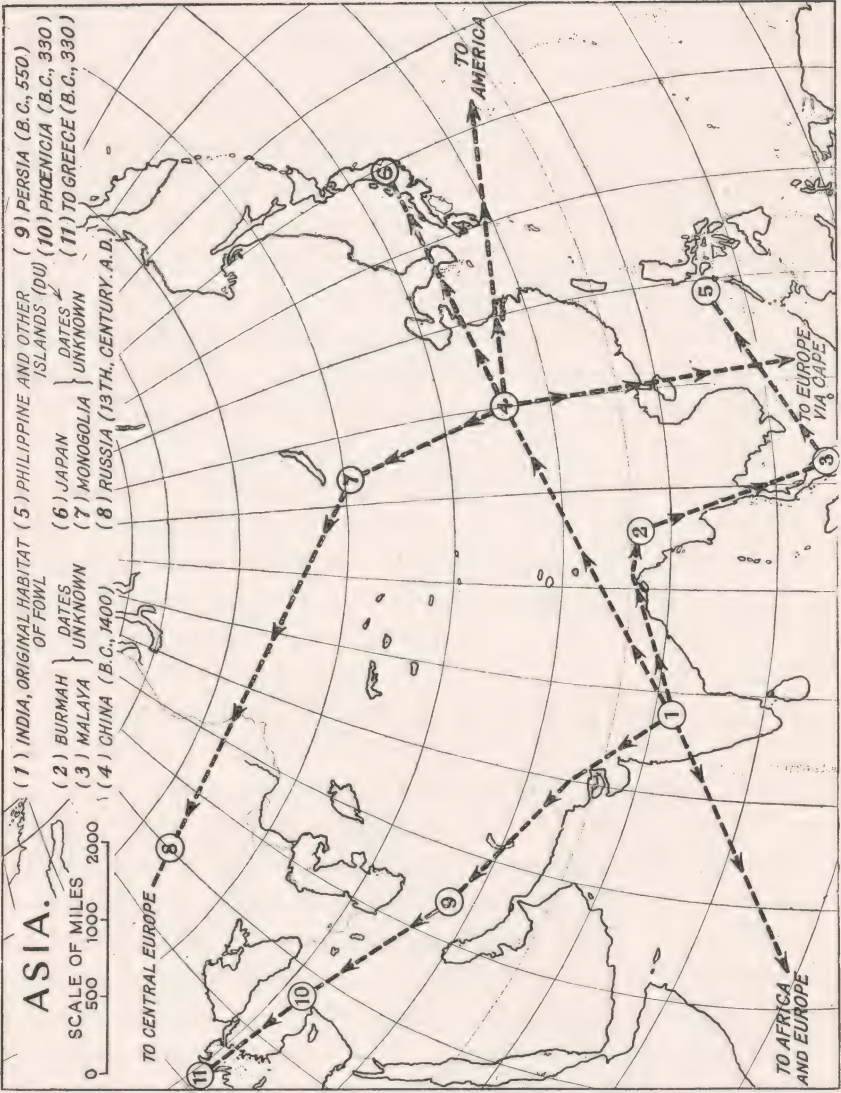
### DISTRIBUTION OF THE DOMESTIC FOWL,\*

From the evidence which is available is indicated that the sport of cock-fighting was chiefly responsible for domestication of the fowl, in the first place, and for its wide dissemination during many centuries, and that, when once it had been brought into the service of man, this sport was instrumental in making it popular. Cock-fighting has been for many centuries followed extensively in Southern and South-eastern Asia, and in the islands of Sumatra, Java, Borneo, the Philippines and Malaya, as is still the case. In India, among the native princes, it is a favourite pastime. When it is remembered that (9) 'the first mention of cock-fighting is said to be in the reign of Cræsus, King of Lydia (A.M., 3426), and in India it is mentioned in

\* Plates III and IV







DISTRIBUTION OF DOMESTIC FOWL—MAIN LINES.



the "Codes" of Mann, written 1,000 years before Christ,' it will be realised how ancient is the sport. At a period when war was the natural order of things it can be understood how attractive these warrior-like birds would be to soldiers, who, on their return home would take back with them specimens of such rare fowls. The Persians introduced the fowl into their own country as a result of their conquest of India by Cyrus about 537 B.C. Two hundred years later it became the turn of the Persians to be invaded, falling to the prowess of Alexander the Great, who made the Eastern Empire subject to Greek rule. So far as we can trace it was this event which popularised the fowl in Europe, and in Greece it became known as the Persian bird. Whether the Greeks had already heard of or seen specimens of game cocks, and that was an incentive for invasion of India, cannot be told. Wars have been waged and the destiny of nations decided for more trivial reasons. The evidence, however, indicates that importations had been made before that period. Aristotle, who died 347, B.C., mentions the fowl familiarly in his writings, which proves that it was well known.

Prior to the periods just mentioned there had been an important migration of the fowl in an eastern direction. A Chinese Encyclopædia, compiled about 1,400 B.C., that is, about the time when Moses led the Children of Israel from Egyptian slavery to the great trek which led to conquest of the Promised Land, mentions the fowl, from which, for reasons already given, we can assume it was entering into the better known stock of China, unless it and the mention of the fowl in the Book of Kings refer to some other class of bird. On the other hand it may be that the Jungle Fowl, of one species or another, was also indigenous to parts of Southern and Eastern Asia, and that there was an independent domestication to that in India, which would explain the special characteristics and structure of Chinese races of fowls. The statement has been made that Buddhist priests passed from India to China about B.C. 1,500, and that they conveyed the fowl, already domesticated in the former country, to the Celestial Empire. In all the centuries of primitive history down to comparatively recent times priestly and monastic houses and settlements were the advance guards of civilisation, the heralds of progress. Priests, whatever the religion they followed, were in many directions

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the most advanced in culture of their day and generation. Their conditions of life led them to devote attention to stock breeding and plant cultivation, to developments of the art of husbandry, and to adoption of improved and more economic production. It may be that these missionary priests were thinking of their own needs. That has been the case in our own times. A suggestive fact is that in Europe the Roman Catholic countries where Abbeys and Monasteries were numerous were, until the last century, most highly developed in poultry breeding. Millman, in his "History of the Jews," states that there was a migration of Jews to China several centuries before Christ. Evidence, however, indicates that the Hebrews have never given much attention to stock breeding. It may be doubted whether they were responsible to any extent for transmission of fowls to the far east.

It would appear that the first compulsory migration of the fowl was eastward, that is, to China, where, be it noted, the practice of husbandry was anterior by milleniums to that of western nations. The last named were at that period primitive and knew little of civilised methods of life. As pointed out by the late Professor King, of Wisconsin, the Chinese have been farmers for forty centuries. Doubtless they possess a wealth of experience which, were it available to us, would add greatly to human knowledge. Progress has been much more rapid in Europe, America, Africa and Australia during later centuries. China has rested upon her past, and has not advanced to the same degree, largely by reason of the fact that she had been so far ahead. With her the national evolutionary process appears at some time to have been arrested. What the future has in store for her cannot be seen. Hitherto the Chinese have been characterised by an intense conservatism, a rigid adherence to ancestral tradition and method. The unchanging nature of their institutions and repugnance to innovation which have marked that people show signs of breaking down. Below is shown that, attendant upon the more northern migration of the Mongols westward there was a distribution of the Chinese type of fowls ultimately reaching Europe.

Reverting to the westward migration, which has proved to be the more important, Hehn gives some interesting information as to the culture of the fowl in Greece (6) : ' The original home of the fowl was



India, and it first migrated West with the Medo-Persian invaders.' In a work on the temple of the Damian Hera, Menodotus says, 'as the cock spread from Persia, so the sacred peacock spread from the temple of Hera to the surrounding districts.' In the religion of Zoroaster the dog and the cock were sacred animals; the first as the faithful guardian of flocks and herds, the second as the herald of dawn and the symbol of light and the sun. The cock is specially dedicated to Craosha, the heavenly watchman, who, awakened by fire, awakens the cock in his turn; he by his crowing drives away the *Daevas*, evil spirit of darkness, particularly the yellow, long-fingered Bushyacta, the demon of sleep. . . . Wherever a Persian settled he took as much care to procure a cock as to pray and wash before and during sunrise. As far as the limits of the Persian Dominion reached, there, no doubt, the tame and useful, easily-transported, and at the same time so peculiar creature, found a welcome in the homes of non-believers. On the so-called Harpies monument from the Acropolis of Xanthus, Lycia (now in London), there is a figure of a god to whom a cock is brought as a gift or sacrifice. If this monument, as archæologists suppose, really belongs to a period before the taking of Xanthus by the Persians, then the Lycians must indeed have been acquainted with the cock before the spread of the Persian dominions. If the domestic fowl had been familiar to the Lycians long before the Persian time, the Greeks must have shared in the knowledge; but neither in the works of Homer and Hesiod, nor in the fragments of the elder poets, is there any trace of cock or hen. Surely among the people who had no clocks the prophet that proclaimed the hours by night, the proudly strutting, winking, crowing Sir Chanticleer, the supremely jealous sultan (*salax gallus*) surrounded by his harem, the hot, vain-glorious champion armed with his comb, tassels and spurs, Dame Partlet announcing to the world her last achievement—all this merry parody of a human family and aristocratic manners could not fail to be a frequent subject of description and comparison had the poets an opportunity of observing it. It did not escape even the ancients that Homer, though he used the proper names Alector and Alextrojan, seemed to know nothing of the fowl so called.'

The oldest mention of the cock in Greek literature is in Theognis, who wrote in the latter half of the sixth century, B.C. In the writings

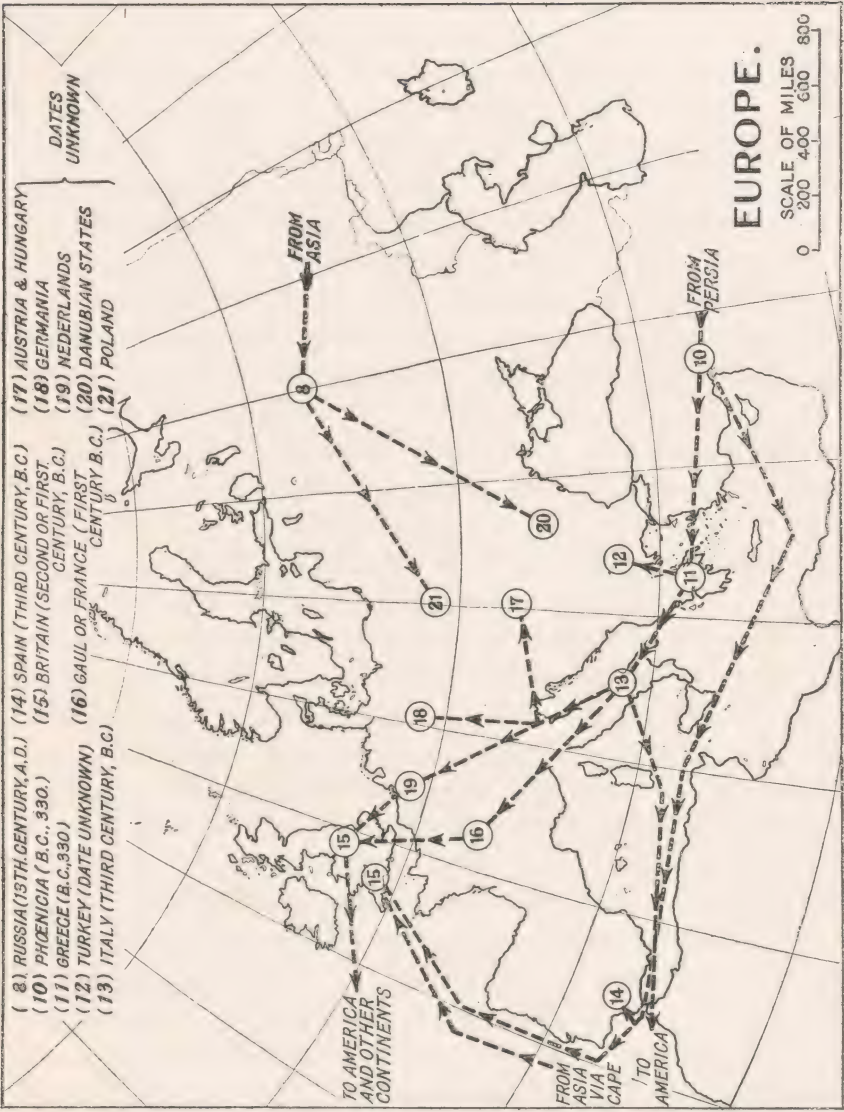
of Epicharmus, who flourished during the Persian wars, and in those of Simondes, Aeschylus and Pindar, we find the cock, under the proud name of Alektor, as the usual companion of man. The fights between cocks became a striking example for poets as soon as the fowl was a familiar object. 'In the "Eumenides" of Aeschylus, Athena warns the Athenians against civil war as resembling the combats of cocks. Pindar compares the inglorious victories of a civil war to the victories of a barn-door fowl. And it is stated that Thermistocles raised the courage of his army by reminding them how two fighting cocks risk their lives, not for the hearth and its penates, but for fame alone. When afterwards the public cock-fights, which are represented on innumerable ancient monuments, were supposed to be derived from the above speech of Thermistocles, it proves at least that cock-fighting was not thought as older than the Persian wars. The comic poets still call the bird the Persian bird.' (6).

Darwin (2) states that the fowl figured on some of the Babylonian cylinders, for Mr. Layard had sent him an impression of these dating from the sixth or seventh centuries, and also on the Harpy tomb in Lycia about 600 B.C., from which fact he thinks that the fowl first reached Europe somewhere about the sixth century B.C. It is surprising that there has been no mention discovered, except a somewhat doubtful one, on monuments in Egypt, which fact may be taken as proof that it was not then known in that country, for these monuments are otherwise full of the details of ancient housekeeping on the Nile. There are to be seen flocks of tame geese being driven home from the pastures. The birds and their eggs are being carefully counted, but nowhere cocks and hens. Aristotle and Diodorus refer to the artificial hatching of eggs by burying them in dung. The probability is that in such instances the eggs of ducks and geese were so hatched.

It is probable that by the time of the Christian era—that is, during the interregnum between the closing of the Canon of the Old Testament and the opening of that of the New Testament—the fowl had spread itself all over the western parts of Asia and the eastern parts of Europe, at any rate, though it was evidently known in parts of Western Europe. The reference to the crowing of the cock at the time of Peter's denial of our Lord could only have reference to the domestic fowl. There







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was apparently nothing remarkable in the crowing of the cock.

Hehn (6), after showing that the fowl entered into the superstitions of the Romans, and afterwards bred it for its food value, goes on to state that 'There is no direct historical testimony as to the manner in which domestic fowls were introduced into Central and Southern Europe. They may have come straight from Asia to the kindred nations of the South Russian steppes and the eastern slopes of the Carpathian mountains, whose religion agreed with that of the other Iranian races, and some of whom already practised agriculture in the time of Herodotus ; or by way of the Greek colonies on the Black Sea, the influence of which, as is well known, spread far and wide ; or from Thrace to the tribes on the Danube ; or from Italy by way of the ancient commercial roads across the Alps ; or through Massilia to the regions of the Rhone and Rhine ; or, finally, by several of these ways at once. The more a people of nomadic habits accustomed themselves to a settled mode of life, the more easily would the domestic fowl find shelter and acceptance among them.'

Whilst the distribution of the domestic fowl was a gradual progression on the lines briefly recorded above, passing from one country or region to another as a result of war, or commerce, or other intercommunication, there were contributing streams which were of importance. The first Roman invasion of Britain was in 55 B.C., followed by a second about ten years later. Not for a considerable time was the Conquest sufficiently complete to secure settled conditions favouring introduction of stock of any kind, except horses for war. Later that evidently took place. In the excavations which have been made at Roman Camps as far north as Cilurnum, south of Hadrian's great wall built across England between the River Tyne and the Solway Firth, that is, south of the border between England and Scotland, it has been found that there was a high standard of comfort, even of luxury. Under such conditions, as is always the case, the food resources of the surrounding districts were developed to a considerable degree. Armies and camp settlements must live on the country. If the fowl had followed such conquest we should have been indebted to the Romans for its introduction into Britain. That they at some period during the 400 years occupation of Britain brought over the newer types which had been evolved in Italy is unquestionable, among which may be

included the Dorking. Birds of that class had been also introduced into Gaul, as France was then called.

The fowl was well known in Britain before Cæsar's invasion, both for its food value and for the sport of cock-fighting, the latter especially in Cornwall and the south-western sections of the island. From other and more recent evidence it would seem that the ancient Britons were more civilised than had been supposed. For a considerable time students were puzzled to know how the fowl had reached Britain. Among other lights on the problem is an interesting conversation with an old sea captain at Cadiz in Spain recorded in a recent book (10), in which he said, 'Picture to yourself, Señora, the bravery, the courage of those ancient people, the Phœnecians. They were the true sailormen, ever adventurous, ever daring. All others were content with the Mediterranean: that inland sea with no tides. No one ventured outside the great gates, the Pillars of Hercules, which stand at Gibraltar and guard the way to the great ocean. Then one day some brave Phœnecian captain adventured forth and sailed through them into the open sea, and discovered this lovely place, and founded an ancient city here. Not only did they found a city; they founded settlements all along the coast.'

Cadiz was undoubtedly the Tarshish of the Bible. It became, owing to its position, one of the great ports of the world, a calling point for ships of all nations, the starting place for further adventures until late centuries. As the Phœnecians carried fowls on their ships doubtless some of these formed the basis of Spanish breeds of poultry. Not only so but the settlements there would appear to have been a step towards Britain. It is well known that two thousand years ago the Phœnecians sent their ships to Cornwall for the tin ore which still is part of the mineral resources of the extreme south-west of England, and that when Cæsar invaded Britain he found the natives were keen cock-fighters, as were the Phœnecians themselves. It may, therefore, be assumed that it was in this way the fowl first reached these western islands. Recent investigations give credence to the suggestion that Cornishmen, and also the Bretons in north-western France, are descended from the Phœnecian settlers in both countries. In later centuries with the development of the spirit of adventure and discovery overseas, revealing vast areas of the globe which had to



that period been unknown, leading to settlements in America, South Africa and the Antipodes, wider distribution of the fowl took place from Spain and Britain.

During visits paid to Russia and the Balkan States races of fowls were seen which differed from those found in other parts of Europe and western Asia. Tradition was to the effect that these had come from the far east following upon the Mongol invasions of five hundred years ago. They were of a distinctly eastern Asiatic type. Thus the great territory from the Gulf of Finland to the Lower Danube is evidently the meeting ground of two streams, first, that from India to China and through central Asia to Russia and the Balkans, and, second, by way of Persia, Greece, Italy and Spain to central and western Europe, and thence to other parts of the world. In the chapters dealing with the various races of poultry information is given as to the distribution and evolution of individual breeds in more modern days.

### TECHNICAL TERMS.

**Technical Terms.**—Before dealing with the various races of poultry, it is necessary that the technical terms used shall be explained.

The following are the leading technical terms used in description of the various races and sub-races of poultry.

*Barred.*—In fowls so designated there are transverse but solid black or very dark bars across the feathers.

*Beak.*—Horny protuberance from the mouth, consisting of upper and lower mandible, with nostrils at base of former.

*Bean.*—Small oval tip on bill of duck.

*Beard.*—See Muffs.

*Beefy Comb.*—Large and thick, disproportionate to the head and body.

*Bill.*—Upper Mandibles of Waterfowl.

*Booted.*—Heavily feathered on legs and feet.

*Breast.*—The fleshy part of body from the chest to stern.

*Breed.*—The race or family, as “Dorking.”

*Carriage.*—The general bearing and style of body.

*Caruncled.*—Fleshy protuberance on the head.

*Chest.*—The front of sternum.

*Cock.*—A male fowl or turkey over one year old.

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*Comb*.—The fleshy growth on top of the skull, larger in the male.

*Condition*.—General health and appearance.

*Crest*.—Tuft of feathers forming a crown to the head, in some cases very large and globular.

*Crop*.—Food reservoir carried in recess lying between neck and body.

*Crossing*.—Mating of different varieties or breeds.

*Crow-headed*.—Long and narrow.

*Cushion*.—Group of feathers partly covering and below tail of hens.

*Double Mating*.—Breeding from distinct pens to produce males or females for exhibition where the standards adopted for the two sexes are incompatible.

*Drake*.—Male of duck species.

*Earlobe*.—Bare patch of skin below the ear, varying greatly in colour and size.

*Face*.—Flesh around the eye, usually bare.

*Fifth Toe*.—A supernumerary toe, found only in a few races.

*Flights*.—Primary feathers of wings.

*Fluff*.—Soft feathers covering thighs and posterior of fowl.

*Gipsy Face*.—Dark purple colour of face.

*Hackle*.—Feathers, usually long and narrow, covering neck and root of tail.

*Hock Feathers*.—Stiff feathers above the leg-joint, usually developed in feather-footed races.

*Horned Comb*.—Formed by two or more spikes or horns.

*Laced*.—Each feather is edged with a narrow band of dark colour or black, or white surrounding the ground colour, giving an even crescentic appearance on the body. In some cases they are double-laced—that is, the margin of black, etc., is divided by a fine line of white, etc.

*Leaf Comb*.—Like two large leaves opened out, with a third protuberance in the centre.

*Leg and Foot Feathering*.—An ornamental feature found chiefly in certain Asiatic races.

*Mossy*.—Irregularly pencilled.

*Mottled*.—The plumage is irregularly marked with splashes or spots of darker or lighter colour, as in Houdans.



*Muffs, or Beard.*—Feathers found by the side of the throat and under the head, in some breeds.

*Neck-backle.*—Long, narrow feathers covering the neck.

*Patchiness.*—Irregular colour of plumage usually found in self colour races, more especially in females.

*Pea or Triple Comb.*—Usually like three fingers on top of head, the centre elevated above the others.

*Pencilled.*—In this case there are bars or crescents across the feathers, formed of masses of dark lines on the ground colour, but not solid.

*Poult.*—Young of domestic Turkey.

*Primaries, Wing.*—The outer flight feathers, but hidden when wing is closed.

*Pullet.*—Female fowl under a year old.

*Rose Comb.*—Of varied forms ; where flat, a long spike stands out behind, and is carried well above the head ; in the curved type the comb is smaller and lies close to the skull.

*Rustiness.*—Reddish tinge of the plumage.

*Saddle-backle.*—Long, narrow feathers, covering the root of the tail in males.

*Secondaries' Wing.*—The inner flight feathers, on the outer side when wing is closed.

*Sheen.*—Lustre, usually green or purple, on black plumage.

*Sickles.*—Long crescentic feathers of tail in males.

*Single Comb.*—Narrow comb, usually longer than the head and beak, carried well over the neck ; evenly serrated on upper side ; in large combs standing upright in the cock, hanging over on one side in hen ; in smaller, upright in both sexes ; sometimes the comb slopes sharply from front to back and in others is cut away from the head at back.

*Spangled.*—At the extremity of each feather is a spot, usually oval or round, of a different colour from the ground of the plumage.

*Spur.*—Sharp weapon for defence, on inner side of each leg ; pronounced in male, rudimentary in female ; increasing greatly with age.

*Squirrel Tail.*—Carried towards the neck over the back.

*Stiltiness.*—Length of leg disproportionate to the body.

*Symmetry*.—Conformity and harmony of entire body.

*Thighs*.—The flesh-covered part of the lower limbs.

*Tuft*.—A small cluster of feathers on head.

*Variety*.—Division of family, as *Dark Dorking*.

*Vulture Hock*.—Stiff quill feathers on the thighs.

*Wattles*.—Pendant fleshy growth from lower mandible, usually conforming to the comb in size ; large in the male.

*Whip Tail*.—Small, narrow and pointed tail usually found on modern Game.

*Whiskers*.—Feathers hanging below the lower mandible.

*Wing-bar*.—Transverse markings on wings of many breeds, chiefly in males.

*Wing-bow*.—Base of wings at shoulders.

*Wry Tail*.—Carried on one side.

#### SUMMARY.

1. That the ancestor of domesticated fowls was the Jungle fowl, still widely distributed in India, and that the majority of modern breeds are descended from the *gallus Bankiva*, or *ferrugineus*. Indications, however, are to the effect that the Chinese breeds, differing in structure of body and habit, own a more remote ancestry, though of the same species.
2. That the races of domesticated ducks and geese have descended from the Mallard and Greylag respectively which, as migratory birds, are widely distributed over the northern half of the globe.
3. That the turkey originated in North and Central America where it was domesticated long prior to the discovery of that Continent. The first European importation was to Spain in A.D. 1500.
4. That the domestication of the fowl followed adoption of a settled mode of life by human inhabitants in Asia, in some cases for food supply, and in others for the sport of cock-fighting. Its distribution in the more remote centuries was due to migration of peoples, to war, discovery, and commerce, and in later years to extension of intercommunications between various countries.
5. That there were two great streams of distribution, the earliest of



which was from India to China, whence it turned northward and finally westward to Europe, and the later through Persia and Phœnecia to Europe and thence to other countries.

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- (5) '*Journal of Horticulture*,' Vol. xxviii (London, 1862).
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- (7) 'Conquest of Mexico,' by William H. Prescott (London, 1872).
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CHAPTER II  
ASIATIC RACES OF FOWLS.





## CHAPTER II

### ASIATIC RACES OF FOWLS.

|           |               |
|-----------|---------------|
| BRAHMA.   | ASEEL.        |
| COCHIN.   | BLACK SUMATRA |
| MALAY.    | SILKIE.       |
| LANGSHAN. | YOKOHAMA.     |
| JAVA.     |               |

It is generally recognised, as indicated in Chapter I, that the domestic fowl originated in Southern Asia, and that the breeding of these birds has for many centuries been very largely adopted throughout the eastern and southern sections of that great continent, as in the islands from Japan to the Malayan Archipelago. Owing to the wide distribution, races are met with of distinct individuality. In Burma, China and Japan, peculiar forms have been developed, some of a diminutive or bantam character. In what are known as the Japanese and Booted Bantams, and the long-tailed Yokohama, the abnormal is strikingly manifest. Among the larger races several of the best known have been imported directly into Europe and America, where considerable modifications have followed their introduction. These races are of a distinctive type, and, in several, there is large size of body, they have long legs and neck, are heavy in bone, and, with one exception, produce tinted-shelled eggs—in some cases the shells are very deep in tint. These breeds have, without exception, been obtained from the sea coast of Asia, or from the islands where Europeans have settled. Possibly, as the central Asiatic States are open to foreign trade and travel, we shall learn of other forms and variations of those already known to us. Pioneers in the opening up of any country are seldom interested in the study of animal and plant life,

and it is not often much is learnt until there have been settlements for a more or less prolonged period. For obvious reasons we have included the Game fowl among British breeds, even though it is true that the type and the sport came in the first place from India.

An interesting fact is that of the breeds named in this chapter with two exceptions, the Brahma fifty to seventy years ago, and the Langshan more recently, have never won any marked degree of popularity for productive purposes. The Brahma, the Cochins and the Langshan have had in turn a considerable vogue among exhibitors, at any rate in the Nineteenth Century, since the close of which their cult has declined. Indirectly several of the races named have exercised great influence upon the evolution of newer breeds, and it may be assumed that in this direction their value is by no means exhausted.

### BRAHMA.\*

Nomenclature : In all countries, Brahma or Brahma-pootra.

Varieties : Light, Dark.

Classification : Exhibition, General Purpose.

Colour of Flesh and Skin : Yellow.

Colour of Legs : Yellow.

Colour of Egg-shells : Medium brown.

**Origin.**—There has been much controversy respecting the origin of the Brahma. The facts have been difficult to obtain, and in not a few instances were obscured by mis-statements, designed in many cases to deceive. Those who are sufficiently interested can find an excellent summary in Wright's 'New Book of Poultry.' The Brahma originated in India, where fowls of the original type are still met with, under the name of the Grey Chittagong in the Brahmapootra district. The division into two colours is a result of breeding and selection in America and England, as the first specimens were light in plumage. Mr. Lewis Wright (1) was inclined to accept the suggestion that the Dark Brahma was originated by the late George P. Burnham, of Boston, U.S.A.

**History.**—The first Brahmas appear to have been imported into America in September, 1846, brought direct from the port of Luki-poor, which is some distance from the mouth of the Brahmopootra river in Eastern Bengal, India. The birds were purchased by a man

\* Plates V and VI







DARK BRAHMA COCK  
(Bred by Mrs. A. Campbell, St. Ives, Ringwood, Hants)



DARK BRAHMA HEN  
(Bred by Mrs. A. Campbell, St. Ives, Ringwood, Hants)

Photos, A. Rice



named Charles, living in Connecticut, and the first brood was hatched in May, 1847. In the autumn of that year they were sold to Mr. Virgil Cornish, of New Britain, Connecticut, and were used by him for breeding, commanding considerable attention by reason of their great size, some of the adults weighing 12 to 14 pounds. These varied in type and character and had a small comb. Many did not show the pea comb which is now a fixed character. The name Brahma-pootra was given to them by a committee sitting at Boston in 1850. Three years later a pen of these birds were sent by Mr. G. P. Burnham, who was the Poultry Barnum of his day, to the late Queen Victoria, the advertising value of which was great. So far as known this gift was the primary introduction into Britain, where the breed was taken up with enthusiasm, increasing as years went on, until the seventies of last century when decline set in. In America a similar set of conditions prevailed, though not so pronounced due to adoption of extreme ideals in breeding being less manifest, and, as a consequence, to conservation of the productive qualities. In Britain breeding ran riot. In the dark variety nearly everything was sacrificed to pencilling in the hens, and to abundance of feather in both sexes. Both with darks and lights the greatest amount of harm has been wrought by excessive development of hocks and leg and foot feather. The Brahma is a remarkable example of the breeder's skill, a massive bird, finely proportioned and with attractive markings. The result, however, from a productive point of view, has been most disastrous. Feather is the most expensive material to produce. The modern birds are slow in growth, heavy eaters and low producers in meat and eggs. As a consequence the Brahma is a purely fancy fowl in Europe. In America, where the darks never attained great popularity, the light variety still retains considerable favour, owing to the fact that it has not been bred on extravagant lines, and has retained a considerable measure of its meat properties.

**Economic Qualities.**—What first commended the Brahma was the fact that the hens were good layers, especially in the colder months of the year, the eggs being tinted in shell, although somewhat small in size, as is the case with most of the Asiatic races. The number of eggs per capita in a flock would appear small in these days. At the time named were individuals which ran well on to the 200 standard.

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These were exceptional. Probably much of this high productivity was due to change of conditions referred to in a later chapter, the effect of which soon passed away. The young stock were good upon the table for a General Purpose breed, as they carried a considerable amount of flesh, and were moderately quick in growth. Abnormal development of feather has checked both laying and flesh qualities. Whilst the breed is not of the value as formerly, it possesses a great amount of strength and vitality. A striking fact is that some of the best breeds introduced within recent years have had an infusion of Brahma or Asiatic blood, derived more especially from the Light Brahma, which for crossing purposes is to be highly recommended if of the lighter feathered or American type. The decline in popularity is a further example that where the development of characters reduces the productive qualities, this in turn is followed by loss in the exhibition sphere. The solitary exception to this general rule is in the case of Bantams, which are in a different category.

**Description.**—The Brahma is a large bodied fowl with full, broad and deep breast, carried well in front, though that is not apparent owing to the height of the bird; the back is broad, and appears to be short, though that is not really the case, due to the wealth of neck and tail feathers; the tail is medium in length, rising with a sharp curve from the back and nearly upright, being almost as high as the head; the head is small as compared with the size of body, of medium length, neat, and well rounded, surmounted with a triple or pea comb, the centre ridge higher than that on either side; the wattles are small and well rounded; the beak is yellow, and the eyes orange-red; the bird is heavy in bone, and the legs stout, of good length. The general appearance is that of a large-bodied fowl, with upright carriage. The skin is yellow, as are the legs and feet. Weight: adult cock, 11 pounds and upwards; cockerel, 9 pounds and up; hen, 8 pounds and over; pullet, 7 pounds and upwards.

The differences between the English and the American Brahmas are considerable. In the former more attention has been paid to colour than with the latter, and there is a more perfect conformity, though at the expense of economic qualities. The main difference, however, is in the extent of feather development. The Standard of the English Poultry Club provides that (2) the fluff is soft and abun-







LIGHT BRAHMA HEN

(Bred by Mr. H. Martin Wright, The Poplars, Gt. Shelford, Cambs.)  
*As Pullet*: 1st Bristol; 1st Dairy; 3rd Olympia.  
*As Hen*: 2nd Bristol; 3rd Birmingham; 3rd Palace.



BUFF COCHON HEN

(Bred by Lord Dewar, Homestall, East Grinstead, Sussex)

*Photos, A. Rice*

dant, covering the hind parts and standing well out behind the thighs ; hocks amply covered with soft rounded feathers, or with quill feathers provided they are accompanied by proportionately heavy shank and foot feathering ; shank feathers as profuse as possible, standing well out from the legs and toes, extending under the hock feathers and to the extremity of the middle and outer toes, profuse leg and foot feather, without vulture hock being desirable. It is found, however, that hocks and heavy leg feathering accompany each other. In the American Standard (3) vulture-like hocks are a disqualification, but it is stated that the thighs shall be well covered with soft feathers, nicely rounded ; the legs be well covered on outer sides with feathers, and the outer and middle toes well feathered. The important differences here indicated are the results of breeding to different ideals over a considerable period of time, leading to the modifications noted.

**Varieties.—Light :** The plumage is of a silvery white, sharply striped with black in the centre of each feather on the neck and saddle hackle ; the primary feathers on the wings are black, or black edged with white, and the tail and tail coverts are glossy black ; the remainder of the plumage is silvery white. In the hen the neck hackle feathers are black surrounded with white.

**Dark.**—The head, beak and shoulder coverts are silvery white, as are the wing bows ; the neck and saddle hackles are silvery white, striped with black in the centre of each feather ; the breast and under parts of the body, thighs and fluff, the primary feathers, legs and leg feathering, are of a deep intense black, though often there is a lacing on breast and a mixture of white in the leg and foot feathers. The special feature of the hen in the English type is that the body colour is clear grey, with a pencilling of black or a darker shade of grey. This pencilling is at times remarkably even and the markings clearly defined.

### COCHIN.\*

Nomenclature : In all countries, Cochín or Cochín China.

Varieties : Buff, Partridge, White, Black, Cuckoo.

Classification : Exhibition, General Purpose.

Colour of Flesh and Skin : Yellow.

Colour of Legs and Feet : Yellow.

Colour of Egg-shells : Deep brown.

The race of fowl which passes under the above name has probably exerted greater influence through its importation to Britain, in the



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first place, than any other breed which has ever been introduced. Even that of the Italian, or Leghorn, though its influence has been more permanent, did not have the same range. The Cochin fowl caused a boom in poultry-raising which continued for some years, and has never been repeated. This breed, which was first known under the name of Shanghai, was vaunted to the skies as the best, the most prolific, the handsomest fowl ever seen. Largely owing to the demand for specimens and the desire to see the best birds, the exhibition system arose, and but for these influences would never have attained its present dimensions. The possession of a pen of these birds was thought to promise a fortune. The hens were claimed to lay several eggs per day, the flavour of which was of the richest. We can remember when children being promised, if they were good, a Cochin China egg, and these deeply tinted eggs were regarded as a great treat. Fabulous prices, even when compared with those of recent years, were given for specimens, £50 (250 dollars) for a cock, £100 (500 dollars) for a pair or trio, and £5 (25 dollars) for a setting of eggs, were common figures. Money was made and lost to a large extent. Poultry shows became fashionable resorts, great crowds gathered at these. In process of time the bubble burst. The vaunted merits of the fowl were imaginary. It, however, laid the foundations of the Poultry Industry as we see it in these days, and awakened a general interest in this branch of live stock, which has increased not only in this country but throughout the world. Thus the Cochin has been greater than its economic qualities warranted.

**Origin.**—So far as known, the original specimens of the Cochin came from Shanghai, in China, and are unknown in the district of Cochin China. It was under the name Shanghai they were at first designated. For a considerable period that was the name given in America. The term Cochin was afterwards generally adopted as a more euphonious title. Records indicate that the first specimens imported into Britain were purchased from a ship in the West India Docks, London, in 1845. As these were different from any other fowl then known they commanded great attention and became very popular. We have never been able to trace that birds of this type are common even in the Shanghai district, and the actual place of origin has not been revealed. The earliest Cochins were largely buff in plumage,



although by no means even in colour, as is now the case, many being much darker.

**History.**—The first recorded importation, as already stated, took place in 1845, though it has been said that two or three years previously specimens of the breed had been seen by officers of both the British Army and Navy in China, indicating that it is a distinct race. In 1845 Her Majesty Queen Victoria received several birds of this breed, exhibiting them at the show of the Royal Dublin Society in the April of 1846. At an exhibition held in the Zoological Gardens, London, in 1845, prizes were given to Malays and other asiatic breeds, but Shanghais or Cochins were not on display.

The example of Queen Victoria, together with their novel appearance, lead to a rapid advance in popular favour. The large size was greatly magnified, and the hoarse crow of the cock was said to be nearly as loud as the roar of a lion. Sports were soon produced from the original buffs, ultimating in the varieties now known. These earlier specimens, whilst more heavily feathered than the Brahma, were not so profuse as is now the case. Breeding and Selection has resulted in an enormous development of hock, leg and foot feathering. The fowls, however, were always thickly feathered, the plumage soft in texture on the body, and the rotundity of shape was greater than in any other breed. As a result of the fact that the breed had not the economic qualities claimed for it, ordinary poultry keepers who are concerned mainly in food production discarded it, and the Cochin mania, which was intense for several years, came to an end. Until the later years of the Nineteenth Century there was a considerable number of exhibition breeders, many of whom were wealthy, who produced remarkably fine specimens. After that time classes declined and are often sparsely filled. In America the Cochin never attained the same favour as in Europe and some of the British Colonies.

**Economic Qualities.**—Throughout the long ages eggs have been a seasonable product during the Spring and Summer months, making their appearance in the winter season few and far between. Exceptions merely proved the rule. The Cochin has always been characterised as a good layer in the colder months of the year, influenced by the heavy coating of feather. This quality contributed greatly to its popularity when introduced. Taking the yearly average, the hens,

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however, can only be regarded as very moderate layers. Usually, after producing fifteen to twenty eggs, they become broody, and are very persistent though clumsy sitters and mothers. The eggs are usually small in size, are very rich in flavour, and have a deeply-tinted shell. Young chickens are tender and fairly good in distribution of flesh. When older they are poor in that respect. The flesh is a deep yellow, and is more on the legs than the breast, due to the fact that they have small wings so that they can hardly rise from the ground. Nature does not develop that which is not needed. The wing motor muscles on the keel are small, whilst those on the thighs are large. These birds are very hardy, and adapt themselves to almost any environment. Exhibition specimens must be kept on short, level grass, as the foot feathering is broken and spoiled if the grass is long or the ground rough. The chickens are easily reared. They are, however, slow in attaining full growth. Male birds cannot be relied upon as breeders after they are three years old, at which age hens are poor layers. Another consideration is the amount of food consumed by the Cochin. In 1853 an account (4) was given of an experiment, in which it was shown that the average cost of feeding the birds at that time amounted to about 4d. (8 cents.) per week. That was confirmed by the experience of M. Lemoine, in France, who found that Cochins consumed 17 oz. 296 gr. of food per diem, as against 7 oz. 31 gr. for Langshans, and 4 oz. 398 gr. for Leghorns.

**Description.**—In general appearance the Cochin indicates a large, strong-bodied fowl, broad, deep and full in front, and thickly covered with feathers. Massiveness is characteristic of this fowl. The back is short and broad, rising to the tail, which is small and full, and free from long sickles; the head is small and neat in comparison with the proportions of the body; the comb is single, small in size, standing perfectly upright, and evenly serrated; the wattles are long and fine, and the ear-lobes are long and bright red; the legs and thighs are short, widely set apart, and thickly covered with feathers, as are the hocks, the latter often curled round the joints: the bone is very heavy, and the entire appearance indicates strength. Weight: cocks, 10 to 13 lb.; cockerels, 8 to 11 lb.; hens 9 to 11 lb.; pullets, 7 to 9 lb.

**Varieties.**—There are five varieties, namely, Buff, Partridge, White, Black and Cuckoo.



**Buff.**—Of this there are two shades, namely, lemon and cinnamon, and a third, silver-buff, is recognised. The plumage is even in shade, varying from a lemon-buff to a rich buff, perfectly uniform throughout, except that there is a little deeper tinge on the hackle and saddle feathers, and in the cock on the wing-bow.

**Partridge.**—These are beautiful birds, rich in colour. The head of the male is dark red or orange, and the hackles orange or golden red, with a black stripe down the centre of each feather. The breast, under-parts, tail, leg-feathers and parts of the wings are bright black; whilst the back, shoulders, coverts and wing-bow are a rich dark-red. In the female the body feathers are brown, each clearly pencilled in crescentic form with dark brown or black. The neck hackle is a rich or orange gold, striped broadly with black.

**White.**—In these when in perfect condition the plumage is a pure glossy white throughout with a clear sheen which is most effective.

**Black.**—Young specimens have plumage of a rich, glossy black, the more metallic the better.

**Cuckoo.**—Ground colour is a light, bluish-grey, each feather barred across with bands of darker grey or blue.

## MALAY.

Nomenclature: *English*, Hungarian, Malay; *French*, Malais; *German*, Malayen;

*Dutch*, Maleier; *Danish*, Malayere; *Italian*, Malese; *Spanish*, Malaya.

Varieties: Red, Black-red, White, Black.

Classification: Exhibition, Table.

Colour of Flesh and Skin: Yellow.

Colour of Legs and Feet: Yellow.

Colour of Egg-shells: Dark brown.

The Malay is one of the older of our pure races of fowls, as evidenced by the fact that the earlier works dealing with breeds of poultry gave considerable prominence to it. It was regarded as the giant among domestic fowls. Although it is not a breed which can be kept for its productive values there are qualities which cannot be ignored for crossing, and in the evolution of new races, of which the Cornish (Indian) Game is an example.

**Origin.**—As its name implies the Malay originated in South-eastern Asia, where fowls of this type appear to be common, and whence it was imported directly to Britain. Moubray (5), writing



in the earlier years of last century, calls it the Chittagong or Malay, and describes these as an Indian variety. In those days the term India was used for all southern Asia. Dixon (6) speaks of it as an Indian breed, and says that it was called by Europeans the 'Kulm' cock. Ferguson (7) states that the term 'Kulm' is but another name for the Malayan class of fowl, and that 'From the peninsula of Malay, situated on the southern point of India'—an error as Malay is the southern point of the Indo-China Peninsula—'where this fowl still abounds, have been imported magnificent specimens of the Malay kind. To Mr. J. Nolan, of Dublin, a man of great experience and sound judgment, we are indebted for the extensive propagation of this very noble family. He was one of the earliest Malay breeders, having obtained his stock from the London docks, to which place they had arrived direct from Malay.' He adds that they were the aborigines of the Peninsula, and that they were the largest known fowls until the arrival of the Shanghai or Cochín.

Doyle (8) calls it the *Gallus giganteus*, or large Kulm fowl, and states that it is found in the Deccan country as well as the Malay Peninsula. This was confirmed by Colonel Sykes (9) who found the Kulm cock domesticated in the Deccan. He believed, however, that it had been introduced from Sumatra by the Mussulmans. In a French work (10) a very wide distribution is given to this race, for the statement is made that it is indigenous to the Malay Archipelago, to the Philippine Islands, to India, Burma, to the islands of the Indian Ocean, and on the eastern coast of Africa.

Mr. R. Whitfield writes (11): 'Some years ago I had a conversation with one Captain Williams, who told me that he had brought many birds of this breed (Malay) to England, and that he had been all through India and the Malay Archipelago, but saw only a few specimens of them until he reached Singapore, where they were somewhat plentiful. He stated that the birds bred and fought in those islands were principally a shorter-legged, longer-bodied and feathered bird than the Malay, and would fight like demons; still the Malay was bred and fought largely.'

From the evidence available we may accept that the Malay originated in South-eastern Asia, and that, when met with elsewhere, it has travelled from its original habitat. Probably, however, there

has been a considerable mixture of races both in Asia and Europe, for Mr. C. F. Montresor (12) states that he believes 'the Malay is no other than a cross from the Indian Game cock and Chittagong hen,' which he had bred on many occasions in India, and produced several that had been bought in Calcutta by stewards of ships and sailors, and have no doubt found their way to the dealers in the neighbourhood of East London, and there sold as Malays. In this way many variations in imported breeds may be explained.

**History.**—We have failed to discover any record as to when the first importations were made. From the fact of the breed having been mentioned by Moubray (5) these had been much earlier, probably in the latter part of the eighteenth century. No dates are given to the purchases made by Mr. Nolan, which would be later. Colonel Sykes is said to have imported his first specimens in 1831. Mr. Lewis Wright quotes (1) from notes supplied by the late Mr. Edward Hewitt, one of the most careful of the earlier exhibitor-breeders and judges, whose recollections of the breed went back to 1830. In 1833 he purchased a pen of Malays at Liverpool. An explanation is afforded why the Malay was at first best known in Cornwall, and also in Devon, is given by Wingfield and Johnson (4): 'The western districts of Cornwall, especially around Falmouth, abounded some few years since with fowls of good Malay blood. Many of these had been landed there from the East Indianmen that were accustomed to make that town their port of call on entering the English Channel.' Until the introduction of wireless installation on ships Falmouth was the port where ships continued to call for orders.

The Malay never became popular. It was bred chiefly for exhibition, and the males were often used for crossing. Breeders introduced considerable changes. For several decades it was medium in length of leg, and the feathers throughout were very narrow, in some cases barely covering the flesh. Longer legs and more feather characterise modern Malays. It may be that crosses with the Game were introduced. From time to time fresh importations have caused reversion to the original type.

**Economic Qualities.**—The Malay cannot be regarded as attractive in appearance. It is as pugnacious in nature as it looks. Few of these birds can be kept together, in which respect it resembles the



Aseel. The hens are poor layers, though the eggs are very rich and have strong shells. The flesh is good in flavour and abundant, but the birds require to be hung well to soften before cooking. Further, the proportion of bone to the total weight is very high. The breed has admirable points, and it is a satisfaction that it has been maintained pure for more than a century. Except for exhibition the chief value of the Malay is in the formation of new breeds, and for crossing to produce table poultry. The hens do not make good mothers even though they are excellent sitters, and are not generally allowed to brood chickens. As the young birds are slow in feathering it is not usual to hatch before May, as they feel the cold very keenly.

**Description.**—The Malay is one of our largest breeds, and looks large in spite of its somewhat sparse amount of feather. It is broad and square in front of the shoulders, tapering to the tail, which gives a wedge-like appearance; the breast is deep and prominent, and the breast bone is usually bare, as are the shoulders, which are wide and prominent; the back is round and slopes sharply to the stern; the wings are very powerful and wide, carried close to the body; the tail is short and drooping; the sickles very narrow; the neck and saddle hackles are also narrow and scanty; the head is large and broad, with deep-set eyes and heavy eyebrows, thus giving a ferocious appearance; the comb is small on the front of the head, in shape like a half-walnut; the neck is long and strong, and is bare at the throat; the legs and feet are heavily boned, giving the aspect of great strength; the thighs are muscular, and scantily covered with feathers. Weight, males, 9 to 11 lb.; females, 6½ to 9 lb. The general appearance is that of a big, gaunt, powerful and pugnacious fowl.

**Varieties.**—**Red:** These are generally a dark red all over the body, with darker reflections of the same colour.

**Black-Red:** The head, hackles, back and wing-bow are rich dark red; the wing-bars, breast, under parts and tail, glossy black.

White and Black are self-coloured. There is also a speckled variety which, however, is seldom seen.







*Photo, A. Rice*

CROAD LANGSHAN COCK. A big winner of prizes.  
(Bred by Capt. H. C. Franklin, Chetlington House, Bedford)



## LANGSHAN.\*

Nomenclature : In all countries, Langshan.

Varieties : Black, White, Blue.

Types : Croad and Modern.

Classification : General Purpose.

Colour of Flesh and Skin : Grey.

Colour of Legs and Feet : Very dark grey, pink between the toes.

Colour of Egg-shells : Dark brown.

All newly introduced breeds have to fight for and justify their recognition. In some instances this has been carried to an extreme, often due to the resentment of those interested in other races. Of that the Langshan has been an extreme example. It has been unfortunate both in its friends and opponents, especially the former. On the one hand, supporters of the Langshan have claimed for it a combination of virtues which it did not possess, and which are not to be found in any fowl. Statements have been made which ignored the basis of natural development, and there has been a keen sensitiveness to criticism. On the other side, for a long time opponents were unfair in the extreme, and blundered grossly by refusing to accept evidence which ought to have been regarded as sufficient, in spite of the untenable assumptions put forward. Personalities were far too frequent. Later came the worst feature of all by the introduction of modifications which ruined the original type and made what is known as the Modern Langshan into a monstrosity.

**Origin.**—The Langshan is undoubtedly a native of the Celestial Empire, where it has been bred for a very long period. It is a pure race as indicated by its prepotency. The first importation took place in 1872, sent direct from China by a relative of the late Major Croad. These birds are found in the Langshan district which is to the north of the Yangtsze-Kiang River. A writer in *Poultry* (13) quotes from a letter received from Mr. Jansen, of the Astor House Hotel, Shanghai, who had considerable experience with fowls and animals in China, in which he says :

‘ They (the Langshans) were not known in Shanghai before the opening of the Yangtsze to foreign trade (1862). The people who know them know nothing of their antecedents. There is nothing

strange in this. Almost every district in China has its peculiar breed of domestic animals. Sometimes villages only a mile apart will have different kinds of goats, different kinds of pigs, different kinds of chickens. If you ask why it is so, they merely stop you with, "I don't know; it was always so." And thus it is with the black fowls from Langshan. No one knows when they came there or how they came there; they are peculiar to that district, and have been from time immemorial.'

As against this statement another writer in the same publication said that he met with them 600 miles up the Yangtze at Hankow, and similar birds further north. That does not, however, disprove the place of origin. The late Miss Croad stated (14) that 'the Langshan was strictly limited to the district of that name, and only found in other parts of China by importation. One gentleman with whom we opened a correspondence told us that he had been in the Imperial Service of China ever since 1859, that he had travelled thousands of miles in the interior in all directions, and had never come across the Langshan in any other part except by importation. . . . He added that he and other residents in North China well remembered the introduction of the Langshan to the European community. Its date was fixed by the placing of a lightship outside the Langshan crossings in 1862.' (These crossings are at a wide part of the lower river.) 'The officers and crew of the lightship, landing to explore and forage, came across this fine breed of fowls, and, as occasion offered, would send presents of birds to their friends in Shanghai.'

That Langshans have been purchased in other parts of China after the opening of that country to traders is evident. The consensus of such evidence is that they had been taken there, and is no more a proof as to place of origin than would be the purchase of a Plymouth Rock in England, or an Orpington in Hungary. A further letter, written in 1877 by Mr. Annatoyn, Inspector of the Langshan Light-house, who says (13):

'The Chinese keep no record of stock of any kind, and of all my inquiries of the Chinese they tell the same story: that the fowls are a breed peculiar to that one particular place, and that the breed is dying out very fast. . . . They are only to be found in the Langshan district, and only in one small section of that. They are not known south



in Canton, Foochow, or Ningpo, or north in Chefoo, Tiensin, or Peking, nor were they known at any part on the Yangtze as far up as Tchang. If they had been brought up from Cochin China or Burmah, it is more than likely that they would have been in the trading junks, and, of course, would have been known round those ports and bred there; or if they had been brought overland, they would most surely have been known in cities on the route or important trading places.'

With these facts and others of a similar nature we must be contented. There is no proof as to when or how the Langshan originated. When first imported it was supposed to be a slightly feathered Black Cochin, as there was a marked similarity between the Cochin, or Shanghai—as they were first called—and the Langshan in 1872, except in body structure. This is proved by the illustrations given by Mr. Lewis Wright (1) representing the Cochin in 1853 and the original Langshans. Both showed upright birds, with single combs, somewhat fully feathered, and with feathers on the legs and feet, the last named feature being as much developed in one as the other. In respect to an importation made by Mr. Thompson, of Aberdeen, in 1877, it is stated (13) that about a quarter of the birds were clean legged, the others being very slightly feathered. The excess of feathering now found on the Cochin is the result of breeding in Europe. Whilst the external differences were slight there were considerable variations in other respects, more especially that the Langshan showed a tighter feathering, a fuller tail, and the skin and flesh were grey instead of yellow, as in the Cochin, the black variety of which had never, so far as we know, the dark legs of the Langshan or the pinky colour of skin between the toes.

We cannot personally remember the original Black Cochins, as our first knowledge was immediately previous to the time when the Langshan was first imported. It would appear that the Langshan was crossed with the Black Cochin, with manifest advantage to that variety, and it is probable the first Black Cochins were either pure or half-bred Langshans, crossed with Cochins in Europe and bred to the ideals of that breed. Further back we are unable to go. The Rev. C. W. Hamilton has suggested (13) that Temmick's *Gallus morio*, or Negro fowl, which was black, with silky feathers, and had been domesticated for generations, was crossed with brown jungle-cocks in China,



and from that mating came the Langshan. This is pure speculation, and it is just as possible that both the Cochin and the Langshan have a common ancestry, for the differences are not greater than might have been looked for if the progeny were bred for a long period of time with different ideals and under different conditions. The two breeds are now absolutely distinct. That the Langshan is a pure and distinct breed is unquestionable.

**History.**—The first recorded importations of Langshans was in 1872, followed by others as they became popular. In these were considerable variations. Had the importers been skilled breeders one type would have been chosen. In some there was a distinct tendency to the Cochin. In fact, birds from the same flocks were exhibited both in Cochin and Langshan classes. Gradually a distinct form was selected. This was round in body, though upright, fairly tight in feather, brilliant in plumage, and slightly feathered on the legs and feet. It won much favour with exhibitors and practical poultry-keepers alike, and became popular in Britain, France and the United States of America.

Then came the introduction of the Black Orpington, which was acknowledged in its original form to be half Langshan, and was frequently called a 'clean-legged Langshan.' With the exception of being rounder in body and shorter in the leg there were distinct resemblances. Leading exhibitors of Langshans began, about 1889, to change the type, with the object of getting away from the Orpington. They bred for extreme length of leg to such a degree that the exhibition Langshan became a leggy monstrosity, stilty, often weak-legged, heavier in bone and smaller in body than at first. It has been suggested that the Cornish Game was crossed into it, of which we have no evidence. The result was disastrous both from the productive and exhibition aspects.

Fortunately, there were enough of the older type of Langshans in Britain and the Continent of Europe, as well as in America, where the Modern Langshan is practically unknown, to be used for regaining something of the influence which had been lost. Thus in British Poultry exhibitions classes are given for what are called Croad Langshans, that is, the older type, and Modern Langshans.

**Economic Qualities.**—The Croad Langshan is a valuable breed

for practical purposes. It is very tame, adapting itself to confinement or full liberty, and, under favourable conditions, thrives well. It is, however, more suited to sheltered positions and to dry, warm soil, than to the more exposed districts. It has not the vigour and activity necessary to combat piercing winds or harsh soil. On good pastures, where there is sunshine and shelter, it thrives well and is highly productive. Fowls must be adapted to their conditions as are larger stock. That is especially the case with chickens. These cannot be regarded as quick growers. The hens are excellent sitters and mothers, and are most faithful in their maternal duties. They are good winter layers. Records made in Australia show that the high fecund capacity is capable of development by systematic breeding. Whether it can be maintained has yet to be proved. The eggs are rich, although, like those from all Asiatic fowls, they are not large in size. These, however, are fully up to market standards, and have a beautiful, dark rich brown shell, which is very attractive on the table. The skin and the flesh are fine in texture and excellent in quality, even though less upon the breast than the legs. Apart from the number of eggs produced per annum, the Croad Langshan is one of the best of our General Purpose breeds.

**Description.**—The Croad Langshan is large in body, fairly long and wide, without the massiveness met with in the Cochin, Brahma and Plymouth Rock; breast deep and long, carried well forward; back rather long and sloping, with the tail rising sharply therefrom; the head small in comparison with the size of body, carried well back, and full over the eye; beak light to dark horn, the latter for preference; comb medium in size, single, carried upright in both sexes, evenly serrated, and fine in texture, which, with the face, earlobes and wattles—the latter small—are a brilliant red; eyes large, bright and sparkling, brown to dark hazel, with black pupil; neck long and well arched, covered fully with long hackles; wings medium in size, carried well up; tail full, with abundant sickles, thus differing entirely from the Cochin, and carried high; legs medium in length, standing well apart, well feathered on the thighs, but with no signs of vulture hocks, and the shanks and outer toes slightly feathered; toes, four in number on each foot, long and straight. The bone should be fine; the shape of the bird is graceful, sprightly and active, with an appearance of



nervousness ; feathers carried close to the body, and brilliant in sheen. Weight : males 8 to 10 lbs. ; females, 6 to 8 lbs.

Modern Langshans, as already stated, are characterised by extreme length of legs and neck, body carried well up, and small, whilst the back is comparatively flat, thus giving a T-shape, lacking general conformity.

**Varieties.**—It has been claimed that the single-combed Langshans alone are pure. That statement is not supported by the evidence obtainable, and in all black races of fowls white sports are common. The Rev. C. W. Hamilton states (13) that in the Langshan district there are three classes of black fowls—the single-combed, the rose-combed and the crested. Mr. Harrison Weir (15) records meeting a Mr. Frank Saunders, who had lived in the Langshan district for over two years. ‘I asked him if he knew the breed in China, when he said that he not only knew the Black Langshan, but kept no others when there.’ He stated that he had seen large flocks of White Langshans, and that some strains had small top-knots, thus confirming what has been quoted from Mr. Hamilton.

**Black :** This variety has remarkable brilliancy of plumage, with a beetle-green, almost iridescent gloss. The legs and feet are of a dark slate colour, tending to a lighter shade, as the birds increase in age, with the skin between the toes and the under side of feet pink, and the toe-nails white.

**White :** It would appear that the first Whites in Britain were a sport from the blacks. Few, however, are met with. The plumage is a pure white, with a silvery sheen ; the legs and feet a light grey, and the toe-nails and beak white. When in good condition they are very beautiful.

**Blue :** This variety has been produced by crosses between the Black and White Langshan in America. Blue is an unnatural colour in fowls, and the colour is difficult to breed. The plumage is a slate-blue, each feather laced with a darker hue of the same colour ; the legs are a medium grey, darker at the front ; beak horn colour ; toe-nails white.



## JAVA.

Nomenclature : The term Java is used in nearly all countries ; *Dutch*, *Zvdehoen* ; *Hungarian*, *Javai*.  
 Varieties : Black, White, Mottled.  
 Classification : General Purpose.  
 Colour of Flesh and Skin : Yellow.  
 Colour of Legs : In the Black variety the legs are black with a tendency towards willow ; In Whites blue-yellow ; in Mottled, willow.  
 Colour of Egg-shells : Brown.

**Origin.**—Considerable discussion has taken place as to whether the Java is an Asiatic or American breed. A writer in an American journal (16) stated : ‘ The stock I had forty years ago was hatched from eggs coming from Java, which I knew were imported from England ’ ; and, further, that ‘ the Java fowl, as bred forty years ago from imported stock—known to have been imported, and also known to have come from the East Indies—was, and is, about the same fowl as bred to-day.’ (1903). As against that statement is one which appeared in 1881 (17), in which it was claimed that ‘ the Java fowl is not a Java fowl at all, but another product of American fanciers—an American breed.’ As to the Blacks and Whites, there is no evidence of origin ; but that the Mottled Javas were produced in America is clear, which would not be difficult from Blacks and Whites. Other influences, however, appear to have been introduced, for it has been stated (17) that the Mottled were produced by crossing a Black Java cock on Light Brahma hens. On the other hand an old breeder has stated (16) that Black and White Javas were used to produce them.

**History.**—It is claimed that the Black Java was first known in America in 1850, and that (16) they were bred to a considerable extent in New York State in the sixties of last century. The first importation into Britain which we have been able to trace was in 1885, which does not agree with what is stated above. On neither side have they attained any measure of popularity.

**Economic Qualities.**—The Java is an excellent layer in winter of rich brown eggs. No comparative figures, however, are available. From the appearance of the birds we are prepared to regard them as potential layers. They are fair on the table, and the yellow skin is acceptable in America. The hens are excellent sitters and mothers,

and the chickens, whilst hardy, are active and easily reared, but do not grow very quickly.

**Description.**—Javas are large bodied fowls, with a full and deep breast, broad back of medium length, and abundant saddles; head of medium size, with black or nearly black beak, and dark brown eyes; comb small, single, and carried upright, and well cut; neck of medium length, and arched; Wings medium in size and closely folded; tail carried rather upright, with long sickles in the cock; the legs are large, strong, and of medium length, stout in bone, not feathered, with four toes on each foot. Weight: males,  $8\frac{1}{2}$  to 10 lbs.; females,  $6\frac{1}{2}$  to 8 lbs.

**Varieties.**—**Black:** The chief characteristic is the brilliant sheen of the plumage, which is of a bright black. This has led to a theory that either the Langshan was the progenitor of or a descendant from the Java. There is no evidence to support either suggestion. The legs and feet are black or nearly black, with a tendency to willow, and the soles of the feet yellow.

**White:** In these the plumage colour is pure white. The legs and feet are yellow, and the soles of the feet yellow.

**Mottled:** The wings, tail and sickles are broken black and white, though mottling is not very even. The same is true of the body plumage and hackles; legs and feet bluish-yellow, with the bottoms of the feet yellow.

## ASEEL.

Nomenclature: Aseel in nearly all countries: *Hungarian*, Aseelsi.

Varieties: Several.

Classification: Fighting, Table.

Colour of Flesh and Skin: White or Yellow.

Colour of Legs and Feet: Various.

Colour of Egg-shells: Tinted.

One of the oldest pure races of fowls known. Has considerable value for crossing.

**Origin.**—The Aseel has been bred in India far before any records were made. It has been kept by the rulers of that country for its fighting qualities. As to the process of development we have no reliable evidence. Mr. Lewis Wright says (1):

‘There can be little doubt that the birds whose battles are alluded



to in the "Institutes" of Menu (Mann), 1,000 B.C., if not the Aseel, as now known, were at least their ancestors, and that the present race has either been maintained or gradually evolved, with express reference to combat, during a period of almost 3,000 years.'

Mr. C. F. Montessoro, late of His Majesty's Bengal Civil Service, thus refers to its cognomen (13):

'This is the name by which the breed is known and styled in India, and has been adopted in England for some years in order to distinguish it from that which is designated "Indian (i.e., Cornish) Game," a breed not known to the natives of India, and originated in England by the late Sir Walter Raleigh Gilbert upwards of sixty years since (about 1840), when he imported from India some Red Aseel into Cornwall, and there crossed them with the Derby Black-reds. Sir Walter (then General) Gilbert personally gave me this information in 1846. The word "Aseel" (Arabic) is an adjective, signifying thoroughbred, high-caste, pure, original, and has no plural, as in our English word "Game." Thus Aseels and Games are a perversion of grammar and nomenclature.'

**History.**—Bred in India for many generations, probably centuries, these birds became known to the British after the occupation of that dependency. It is stated that they were introduced into Europe more than a hundred years ago (18). 'Several well-known men have imported them—notably Lord Clive—and certainly on one occasion they have been considered a worthy present to an English monarch, for a cock was sent to George III, who had him depicted on canvas by Reid.' They have never become popular, nor is that result likely to be achieved, for, like the Kilkenny cats, they will fight until hardly a feather remains. Their courage is remarkable.

**Economic Qualities.**—Owing to the hardness of its muscle the Aseel is not a first rate table fowl. Its use is in crossing with soft-fleshed races. The hens are poor layers, though the eggs are rich, and they are devoted sitters and mothers.

**Description.**—The body is small, short and broad, the breast broad and flat, and the back slopes from the shoulders, which are very wide, to the tail; the flesh consists of hard, wiry muscle; the head is broad between the eyes and deep, with strong beak slightly curved; the eye pearl-white or pink, very prominent, lustrous and

clear ; the comb is small, pea-shaped ; the wattles small and hard ; the neck is shortish, thick, strong, and almost devoid of flesh ; the wings are carried very close ; the legs are stout, the shanks flat, and the feet firm, with four toes ; the plumage is scanty, hard and smooth, and the tail feathers tapering to fine points, and carried low. Weight : males, 6 lbs. ; females, 5 lbs. The sprightly carriage is a leading characteristic of this breed.

**Varieties.**—There are many colours, respecting which Mr. C. F. Montessor has stated (12) : ‘ With regard to colour, no estimation is or ever has been placed, and on the reasoning that “ no good horse was ever a bad colour,” so no preference has ever been given or dependence placed on it.’ There are Blacks, Black Spangles, Reds, Red Spangles, Duckwings, Greys of all shades, Piles, Whites, Speckles and Mottles. Mr. Montessor stated that all the White Aseel in England are descended from a Black hen he imported and mated to a Black-red cock presented to him by the late King of Lucknow, and that the Whites are better in colour in Britain than in India, probably owing to their not being exposed to a hot sun.

### BLACK SUMATRA.\*

Nomenclature : In all countries, Sumatra.

Variety : One.

Classification : Exhibition, Table.

Colour of Flesh and Skin : White.

Colour of Legs and Feet : Dark Olive or Black.

Colour of Egg-shells : White.

**Origin.**—Satisfactory evidence is available as to the origin of this breed. Mr. J. A. C. Butters, writing to Dr. John E. Bennett, one of the first breeders in America, states (1851) :

‘ I received two hens and one cock of this breed direct from Angers Point, island of Sumatra, India, April, 1847. These fowls are found there in flocks of twenty or more, and fly across from the island of Sumatra to the island of Java. The natives call them “ Pheasants,” and are very choice of those they capture and breed. They are kept almost exclusively for fighting.’

The reason adduced for calling them ‘ pheasants ’ is their resemblance, in the length of the tail and the horizontal manner in which it

\* Plate VIII.





PLATE VIII



BLACK SUMATRA COCK  
(Bred by Mr. T. W. E. Royden, Flegg, Burgh, Norfolk)



SILKIE COCK  
(Bred by Mr. J. Lilburn, Craigforth, Elie, Fife)  
1st Dairy; 1st and Champion Cup Crystal Palace;  
1st Birmingham; etc.

Photos, A. Rice



is carried in a line with the body, to the common pheasant. Mr. Lewis Wright, in the first edition of his well-known work (1), describes the breeding of fowls for cock-fighting in the Eastern Archipelago, and gives a plate, after a native Chinese artist, of what is called the Ayam Jallak fowl, meaning green fowl, which in all points except colour of plumage, for there is silver white, is similar to the Sumatra as we know it. He quotes from Mr. Montessor that this type of fowl 'springs largely from the Jungle-fowl, which abounds in the Malay Peninsula, and also in Sumatra.' There is much to be learnt as to these parts of Eastern Asia. Although it is evident the Sumatra is a pure race, it and the Malay may have a common ancestry.

**History.**—After its importation into America in 1847 the Sumatra met with a moderate amount of favour, more especially among devotees of cock-fighting. But for the fact that about the same period cock-fighting was made illegal in the United Kingdom it might have commanded more attention in Britain. At first the breed was known under various names—Sumatra Pheasant Game, Sumatra Game, Sumatra Ebon Game, Java Pheasant Game, Malacca Game—but gradually that given above was generally adopted. Until 1902, however, we have no records of any specimens being introduced into Britain. Since that time the breed has been adopted in a few cases and a Club was formed in its interests for exhibition purposes.

**Economic Qualities.**—The Sumatra, as is usually the case with birds bred for fighting, is well developed in breast muscle. It carries a large amount of flesh, which, however, is hard, and the bird requires to be well hung after killing. The hens are good layers of somewhat small, white-shelled eggs, thus differing from most of the Asiatic races. It is interesting to note that naturalists state that the wild-Jungle fowl, as a rule, lays white-shelled eggs. If so this is a fertile field for study, as is the entire subject of coloration of egg-shells. The chickens are hardy and easily reared, though somewhat slow in attainment of maturity. The breed is not likely to become popular.

**Description.**—Body, long, firm and very muscular; breast broad, full and rounded, with straight keel; back of medium length, broad at shoulders, and, with the body, tapering to the tail; wings broad, strong, large and long, carried close to body; neck somewhat long, well arched, and abundantly covered with long hackle, the saddle-

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hackle also full ; head small, short and round ; beak of medium length, very strong and slightly curved, dark olive or black ; eyes large, bold and bright, dark brown in colour ; comb carried close to head, small and of pea-shape ; face fine in texture and, with the comb, purple ; wattles small, dark red, as are the earlobes ; tail very long and drooping, full, and carried at an angle of 30 degrees above the horizontal ; thighs of medium length, thick, strong and muscular ; shanks medium in length, strong, well set apart, dark slate or black in colour ; feet broad and flat, four long toes, dark slate or black ; the plumage is of a very lustrous greenish black. Weight : males, 5 to 6 lbs. ; females, 4 to 5 lbs.

### SILKIES.\*

Nomenclature : *English*, Silkie, or Silk fowl ; *French*, Nègré-Soie ; *German*, Seidenhühner ;

*Italian and Spanish*, Negra ; *Danish*, Silkehøns.

Varieties : White, Black.

Classification : Sitters, Exhibition.

Colour of Flesh and Skin : Violet.

Colour of Legs and Feet : Leaden Blue.

Colour of Egg-shells : Cream.

Fowls with feathers which are not webbed, and thus the plumage has the appearance of hair or down, are at times found among specimens of all breeds, more especially of the Cochin families. The cause of non-webbing is unknown. In the Silkie fowl this character is fixed and inherent.

**Origin.**—Evidence indicates that the Silkie fowl has been known for several centuries in Eastern Asia, notably China and Japan. Marco Polo, the Venetian explorer of the 13th Century, speaks of fowls with wool on the body instead of feathers. If he referred to birds of this race that is the first mention we have found. The same is true of later writers. Nothing appears to be known or has been suggested as to its descent. That, in spite of the peculiar texture of body covering and the colour of the flesh and skin, different to those of any other breed, it is of the same genus, is proved by the readiness with which it interbreeds with all races of domestic fowls.

**History.**—Apart from the references by Marco Polo may be mentioned that Gesner is his "History of Bird," published early in the sixteenth century, and Aldrovandi (1645) refer to fowls with hair

\* Plate VIII.



instead of feathers. Willughby (1678) discredited these statements. They, however, have since been abundantly proved, and are mentioned by Buffon and other naturalists. The first specimens imported to Europe (Britain) were received from India, about 1850, and exhibited in 1852. Mr. Edward Blyth, Curator of the Asiatic Society's Museum wrote in 1850, from Calcutta, (4): "The only Silkie fowls I have seen here were from China, or Malacca, or Singapore; the latter with single red combs and wattles; the former with complex, blackish rose-combs, very short, stubby beaks, and a quantity of glaucous blue skin in place of wattles, imparting a most remarkable appearance." Since their introduction Silkies have had many admirers and served a useful purpose in the manner referred to below.

**Economic Qualities.**—Silkie hens are good layers of rather small eggs which are excellent in flavour. Their flesh, by reason of its colour, requires much prejudice to overcome. They are very tame and are most suited for gardens and small flocks. They cannot be regarded as hardy as the body covering is non-resistant to damp and rain. Their chief value is as sitters and mothers, in which respect they are extensively used by breeders of Bantams, some of which are unreliable in that respect. Exhibitors of larger fowls frequently, by crossing a Silkie cock with hens of another breed, are able to secure "broody" hens at almost any season of the year.

**Description.**—The body is small, much less than the fluffy covering indicates; the breast is full; back is short, rising sharply to the tail; wings are small and carried low, are soft and ragged at ends of flights; head short and neat, surmounted by a full crest; beak, short, blue in colour; eyes, black; comb, which is a circular cushion, with a transverse indentation, face and wattles, purple; wattles nearly round and small; earlobes, oval and blue or purple; neck short and well covered; legs, leaden blue; toe-nails blue-white; flesh and skin leaden blue or deep violet. Weight: Males, 3 lbs.; females, 2 lbs. or less.

**Varieties.**—Snow white plumage in one case, and deep black in the other.



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CHAPTER III  
ITALIAN RACES OF FOWLS.





### CHAPTER III

#### ITALIAN RACES OF FOWLS.

|            |                     |
|------------|---------------------|
| LEGHORN.   | PADOVANA.           |
| ANCONA.    | MAGGI.              |
| VALDARNO.  | SICILIAN BUTTERCUP. |
| POLVERARA. | SICILIAN FLOWEBIRD. |

The ancient Romans were among the earliest peoples to recognise the value of the fowl for food purposes, especially in respect to flesh qualities. For nearly twenty-five centuries it has been known and bred in Italy. Cicero, Varro, Columella and Pliny refer to it in their writings, the two last named specially mentioning its practical value. Further, these make references to distinctive types, which we have not found in Greece. It is probable that the Romans introduced the Dorking fowl, as we now know it, into France and Britain. In the neighbourhood of Florence we have seen fowls which in coloration of plumage and shape of body indicated affinity with the Dorking. Even these, however, could not be regarded as closely allied. Throughout Northern Italy larger birds are to be met with than elsewhere in the Peninsula. These are due to importations into the most progressive portion of Italy, and to the increasing demand for eggs and dead poultry for immediate consumption and export. The Italian fowl is generally light in body, sparse in flesh, rather long in the leg, and partakes largely of what we know as the Leghorn or Mediterranean character. The conditions of the country and its intense heat, especially in the south, is not conducive to fine quality of flesh.

Until recent years breeding upon scientific lines has been little known, but is now being adopted to an increasing extent. Italian farmers have done little in the way of selection. There has been, therefore, a great lack of uniformity. From the Adriatic to the

Mediterranean, on both sides the Apennines, from the Campagna almost to the Alps, whilst the variety of colours is very great, nearly all fowls met with partake largely of the same character. It is an interesting fact that the Leghorn, taken in the first place to America, what are known as Italian fowls carried to Denmark about 1880, and exportations to other countries, are all of one type, differing in some respects, more especially in colour of plumage.

It is also noteworthy that nearly all the races of fowls met with on the northern shores of the Mediterranean Sea are very uniform. A reasonable conclusion is that the fowls distributed to Spain, France, Austria and Hungary, in the first place, and afterwards by the Rhine valley to the Netherlands and Germany, were from Italy. Intercommunications were frequent in the time of the Roman Empire and Republic, as well as in later centuries. More recently the range has been much wider.

### LEGHORN.\*

Nomenclature : *English, French, Spanish*, Leghorn ; *German, Dutch, Italiener* ; *Danish*, Italicnere ; *Italian*, Italiana ; *Bohemian*, Leghornky ; *Hungarian*, Olasz.

Varieties : White, Brown, Black, Buff, Cuckoo, Pile, Duckwing, Blue.

Classification : Non-sitting, Egg Production.

Colour of Flesh and Skin : Yellow.

Colour of Legs and Feet : Yellow.

Colour of Egg-shells : White.

**Origin.**—There is no definite information as to the origin of the Leghorn, or Italian, fowl. Personal observations, more especially in central Italy, have revealed that it is the common fowl of the country. Its characters, however, have been largely fixed in America and Britain by selection. Modifications have enhanced its productive value in these and other countries. A suggestion has been made that the Leghorn is an old Roman fowl. No evidence, however, is forthcoming. Records are available to indicate that the origin is Italian. When Brown Leghorns were first imported into Britain it was supposed by many that they were produced by crossing Black-red Game with White Minorcas. In 1875 a well-known judge of poultry told the writer, then a young breeder and exhibitor, that he could produce as many as were required by this cross. When invited to do so, he wisely

\* Plates IX to XIII.







ENGLISH WHITE LEGHORN HEN. (Production Type)  
(Bred by Miss Ransford, Finchampstead, Berks)

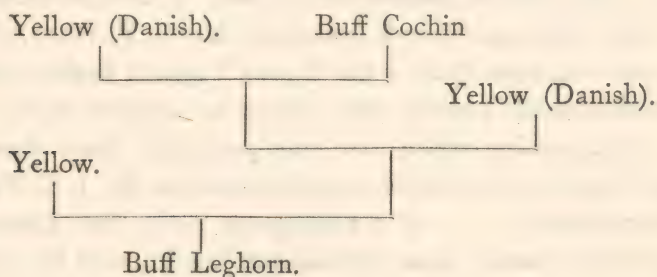


BRITISH COLUMBIAN LEGHORN HEN  
*Photo, W. J. Moore*  
World's Record Hen, S.C. White Leghorn, No. 6. Laid 351 eggs in 364 days at Dominion Egg-Laying Contest, Agassiz, B.C., Canada. Laid 213 consecutive days without a break. (Bred and owned by University of British Columbia, Vancouver, B.C.)

dropped the subject. Had he made inquiries in Italy, the fact that they were common there, and had been for generations, would have shown his error.

White, Brown and Black Leghorns were taken direct from the port of Leghorn, hence the name given, to America, and later to Denmark and other countries, as were the Yellows. During a visit to the Leghorn district in 1903 we met a gentleman there, Signor Boshart, who at one time owned a considerable poultry establishment. He informed us that whilst all colours of Italian fowls of this type are to be met with, very little attention is paid to colour of plumage, but that, if there were any preferences on the part of Tuscan peasants, it was in favour of the Blacks, as they were regarded as the most productive and profitable. The majority of fowls met with, however, are in the direction of Browns and Whites, with intermediate colours. As a rule the birds have yellow legs, but we have seen many with slate-coloured limbs. An interesting point is as to the maternal instinct. Outside Italy the Leghorn is recognised as a non-sitter. There it is not wholly so, for about twenty per cent. become broody, and are sufficient for continuance of the race. Selection has reduced this proportion in other countries.

Following upon introduction of Leghorns into Britain various crosses were made, such as White Minorcas into the White Variety, Black-red Game into the Browns, and Black Minorcas into the Blacks. These are referred to below. The Buffs, or, rather the Yellows, which we first saw in Denmark in 1883, owed their colour to Cochin blood. A full account of the matings is given by Mr. Harrison Weir (1) which may be summarised in the following chart :



Care was taken to select as good coloured birds as possible. There



had to be considerable in-breeding. It took four generations to secure satisfactory results, by which time there was only one thirty-secondth of the Cochin blood remaining. From that time onward no alien blood was introduced. The Buff Leghorn has not, however, won much favour even among exhibitors.

Pile Leghorns were produced by Mr. George Payne, of Woking, England, by crossing White and Brown. The process took four years. Mr. Payne's account (2) of the crosses is very interesting, and he claimed that no alien blood had been introduced.

Duckwings were also bred in Britain, no account of which has been published. It is suggested that a Pile-bred pullet was mated to a Phoenix (Japanese) cock, and the progeny interbred. Duckwings have never been true to the Leghorn shape, good though they are as layers.

What is known as the Exchequer Leghorn is the latest variety of this breed, one which is attaining an increasing popularity due to the fact that there is not only a pleasing appearance and an abundance of scope for the breeder's skill, but that the females are highly productive, which combination is of the utmost importance. In this instance the economic qualities have not been sacrificed for external characters, or *vice-versa*. By reason of the origin and history of the Exchequer Leghorn it is separately classified.

**History.**—In a recent book (3) Mr. John H. Robinson states, on the basis of "Recollections of an Old Poultry Breeder," by John Oldbird, published in 1881, that the first importation of Leghorns took place into America in 1828 or 1829, and that a second importation took place a year or two later. These appear to have been Whites, as they were called White Spanish, or Italians. It is also stated that (4) 'about 1835 (the exact date is unknown), Mr. N. P. Ward, of New York City, received from Italy a few Brown Leghorn fowls, which in his hands undoubtedly proved their claims to superior merit; for, though he wrote nothing which has been preserved about them, he gave eggs and fowls to his friends, one of whom was Mr. J. C. Thompson, of Staten Island. . . . At a subsequent period Mr. Thompson, who seems to have been a most enthusiastic fancier, sent by his son-in-law, who was a sea captain, for an additional supply of the fowls, and received birds that had the same markings as those first imported



PLATE X



DANISH WHITE LEGHORNS.



(by him), and exhibited the same precocity.' Thus we have records of the two main varieties of Leghorns.

Lewis Wright, in the first edition of his well-known work (5), quotes a letter from Mr. F. J. Kinney, of Worcester, Mass., U.S.A., from whom we imported a pen in 1875, who says :

' The first (Brown Leghorns) I ever owned I bought on board a ship in Boston Harbour in the spring of 1853. This was the first trio I ever saw, and I believe the first ever brought to America (in which he was evidently in error). I have since had two other small lots from the city of Leghorn, in Italy, and expect more soon from the same place. The first trio weighed 9½ lbs., were yearlings. Their combs and wattles were very large and coarse ; earlobes entirely red, same as face, comb and wattles. They were not Black-red Games or Black-red Leghorns, but Brown-red—*i.e.*, the cock's breast was dark brown, spotted with lighter brown, the dark brown running up the underside of the neck ; his hackle was light brown, striped with black.'

Mr. I. K. Felch, the well-known American breeder, says (6) that the first importation took place in 1853, but that subsequently crosses were made with Spanish and Black-red Game, and that it was owing to the Spanish influence the white ear-lobe was secured. That may be correct in some families of Brown Leghorns, but is denied in others. Our inquiries in the Leghorn district of Italy indicated a greater amount of variety in the colour and type of fowls met with around that city than in Central Tuscany. The name was given because Leghorn was the port of shipment. A sea-captain would not trouble as to the origin. The birds themselves alone concern him. Leghorn hats are so called from the fact that they were worn there and shipped from that port, though made forty miles away.

White Leghorns as often supposed were not merely sports from the Browns, for these are to be met with in Italy. Mr. A. C. Acker, of Mount Kisco, N.Y., U.S.A., states (7) that his father was a fruit and produce dealer in New York in 1840, living outside the city. Whenever he saw any fowls that he thought would please his wife, he bought and sent them home. His business was such that most of the sea-captains had dealings with him. Between 1840 and 1845 he bought a White cock and several hens from the captain of a tea ship. They were prolific layers, and in size near to that of the White Minorca.

Other breeds were sacrificed, and only the white birds kept, from which came what are known as the White Leghorns. He states :

‘They were so named by my mother, from their (hen’s) drooping combs when in good condition and laying, after what was then known as the Leghorn straw (hat), a straw imported from Leghorn, and greatly worn by both ladies and gentlemen.’

It is stated by Mr. L. C. Verrey (8) on the authority of Mr. H. H. Stoddard, that Black Leghorns were introduced into America, in the autumn of 1871, by Mr. Reed Watson, of East Windsor Hill, Conn., and that ‘in 1878 he got from Italy a cock near to perfection, from which he bred a fine flock, the best he ever had.’

The first Leghorns seen in Britain was a pen of Whites imported by the late Mr. W. B. Tegetmeier. Shortly afterwards a further lot were sent over for portraiture in the ‘Illustrated Book of Poultry.’ In 1872 came the first lot of Browns, imported by Mr. Lewis Wright for the same purpose. Our primary acquaintance with that variety was in 1875, when we obtained some eggs for hatching from the late Rev. A. Kitchen, who had taken up the breed with great enthusiasm. Later in that year we imported a trio from Mr. F. J. Kinney, and in that year won the first Cup given in this country for Leghorns, at the Crystal Palace Show. Very speedily the fowl commanded a large amount of favour, both for exhibition and practical values, as it proved to be a remarkable layer. In 1876 was established the Leghorn Club, the first specialist poultry club in Britain. At first the Browns were the more popular. Among other reasons for their decline in favour was that later to improve the colour of plumage Black-red Game blood was introduced, seriously reducing the prolificacy. The Whites then forged ahead, and have continued to hold the premier position.

About 1879 the Danish Poultry Society, as part of a movement for the improvement of agriculture, and with the definite object of egg production in view, selected the Italian, or Leghorn, as most suited to that purpose. The results were remarkable. In 1885 we attended an exhibition at Copenhagen, where were displayed a considerable number of colours and varieties unknown to us before. It was that exhibition which led to the introduction of the Buff Leghorn. There were on display, Browns, Whites, Partridge, Blacks, Cuckoos, Dappled Greys and Yellows, or Buffs—upwards of 500 Leghorns in the pens.







*Photos, A. Rice*  
EXHIBITION WHITE LEGHORNS (ENGLISH).  
(Bred by Mr. J. H. Gilbert, Royal Aviaries, Windsor Castle)

Meanwhile in America great advance had taken place, and the White Leghorn was proving its remarkable prolificacy as well as adaptability to almost all conditions, and that it was able to bear the strain of high egg production. It is probably correct that there are as many, if not more, White Leghorns as all the other breeds combined. In South Africa, Australia and New Zealand, as well as South America, this breed occupies a foremost position.

**Economic Qualities.**—No breed of fowl could have attained and maintained the popularity of the Leghorn fowl over half a century unless it possessed qualities of a high order, not merely in one country but throughout the entire world. Of these qualities that which is supreme, and in advance of any other known breed, is its wonderful adaptability. Not only does it prove profitable as a great layer in almost every climate or environment, on range and in confinement, in elevated and flat districts, but it possesses an amount of inherent vigour which has thus far enabled it to bear methods of breeding which have ruined other races, and respond to selection for high fecundity to a remarkable degree, at the same time without undue loss of size in eggs, although there are distinct signs of decadence in that respect in not a few directions. It is excelled in weight of egg by the Minorca, to which it is superior in quickness of growth and vigour of constitution. It is characterised by precocity and inherent fecundity. So far as meat properties are concerned it is inferior to most breeds. Leghorns are yellow in flesh, which is stringy in texture. Except when very young they cannot be recommended for this purpose. About the end of last century an attempt was made by British exhibitors to greatly increase the size of body, the result of which was disastrous to egg production and destructive of the distinctive type. That influence has passed away from English White Leghorns. These birds are non-sitters, the chickens are rapid in growth, the pullets lay early, and the birds at all ages have an activity of habit which enables them to withstand adverse influences of climate and soil more than in any other breed we know. The records of Laying Trials in all countries bear testimony to their prolificacy. And at the same time, if rightly bred, they maintain their racial characteristics to a high degree, without loss of laying qualities.

**Description.**—There are marked differences in Leghorns as met



with in various countries, and most of all in the Whites. In Italy these birds are spare and slight in body, oft-times rather rugged, lacking the refinement of outline resultant from selective breeding. At one time the English White Leghorn partook of a rotundity that is not typical of the race, due no doubt to crosses with the White Minorca. Later we had the heavy boned kind already referred to. And in the Browns the infusion of Game blood induced a great change in build of body. More recently interchange between the different countries has tended to greater uniformity. As there is recognition of the importance of combining external characters with productive qualities it is probable this uniformity may be accentuated, though change of environment often produces minor differences. The Leghorn type, which is very prepotent may thus be described : The body of medium size, wedge shaped, that is, wide at the shoulders, narrower at the tail, but deep and full behind, allowing abundance of space for the egg organs ; the back is round, and the breast carried well in front without being too full ; wings of a good size, and carried close to the body ; neck rather long, well arched, covered with abundant hackle ; head small yet broad, with stout horn-coloured beak ; comb, medium in size, long and round, single, carried well down the back of head and over the beak, deeply serrated, standing upright in the cock and falling to one side in the hen ; wattles long, and, with the comb, fine in texture ; face bright, clean and red ; the earlobe oval and small, carried close, white or creamy white ; tail full, well spread, with good sickles, rising nearly upright from the body, though not what is called squirrel, that is, over the back ; legs medium in length, straight, showing little of the thighs ; the legs and feet, upon which latter are four toes, are moderately long, straight, fine in bone, and yellow in colour ; the carriage is upright, showing good action and great activity, but not leggy or stilted. Weight : As already explained at one time English Leghorns were too heavy. That is no longer the case. Males should be  $4\frac{1}{2}$  to 6 lbs., females  $3\frac{1}{2}$  to 5 lbs. These weights keep in view the productive qualities, and do not agree with the standards in the two countries named.

**Varieties.**—The number of varieties has greatly increased since the Leghorn was introduced, mainly by the efforts of British breeders.

**White.**—Throughout the world this variety has attained the







BLACK LEGHORN COCK

(Bred by Mr. R. H. Melbourne) (By courtesy of "Poultry")







BLACK LEGHORN HEN  
(By courtesy of the British Black Leghorn Club)

position of leading member of the Leghorn family. For exhibition varieties with coloured plumage are attractive by reason of the greater problems presented in breeding. Where the main object is production of food it is of decided advantage if the plumage is either black or white. Hence it is that the White Leghorn has, in addition to its vigour of constitution and prolificacy, won its position in connection with commercial egg-production. That has been the experience in the countries already named, and where development of Poultry Husbandry has been most manifest. When first introduced the White Leghorn had always a tendency to creaminess in the feather. That has been in large measure overcome, in Britain by infusion of White Minorca blood, in America and Australia by selection. At one time it was feared that a dead white feather colour would be secured at the expense of vigour. That does not, however, appear to be the case, even though many of the highly fecund families are often anæmic, which may be due to other causes, notably to strain of high production, to encouragement of precocity in time of commencing to lay, and in breeding from immature birds, which apply to all breeds. Exhibitors have always exalted external characters, often disregarding economic qualities. On the other hand those engaged in egg production have in selective breeding only thought of the egg basket, with the result that there came about a great divergence between the two, in many instances the pure racial characters were almost lost. Recently there has been a decided reaction, which has meant that production breeders are paying more attention to type and general breed character. The direction in which the greatest loss was manifest has been loss of size, to which attention is being paid. The White Leghorn has withstood to a remarkable extent methods of breeding which have ruined other classes of fowls.

**Brown.**—When first introduced this variety promised to be the most popular of all the Leghorn family. It was a splendid layer of excellent sized eggs, extremely hardy, and its plumage colour commended it for smaller poultry-keepers living in the urban areas. The birds were medium in length of leg, were somewhat dull in colour. In the males the breast was not solid black, and there was a tendency towards reddishness in the wings, whilst the females did not show the fine pencilling which was afterwards a feature. With a view to secur-

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ing a greater brilliancy of colour, in the eighties of last century exhibition breeders in Britain introduced Black-red Game blood, which lessened the fecundity, lengthened the legs and neck, and destroyed the Leghorn type. As a result its popularity declined, and has never been regained. Too much stress was laid upon the size of comb, upon prominence of earlobes, and on the striping of the cock's hackle, as well as the hen's pencilling. In America the Browns have been divided into two varieties, namely, dark and lights, and the rose-comb grafted upon a limited number. Briefly stated, the colour of the male bird should be as follows: Neck-hackle abundant, the ground colour of which is of a golden bay; each feather has a double broad stripe of black running down the centre, though the feathers near the head are without this stripe; the feathers upon the back are a deep red, nearly crimson, as are the shoulder-coverts and wing-bows. The wing-coverts are of a bluish violet, forming a distinct band across the wing; the primary feathers are brown, and the secondaries a deep bay outside and black inside; the saddle hackle is of an orange-red, sometimes striped; the breast, thighs, tail and underparts are black. In the hen the body colour is a rich brown, evenly pencilled with black; the breast salmon red, running into maroon; the neck hackle rich golden yellow; and the tail black, with outer feathers pencilled with brown. In Denmark, where the original type has been maintained, in addition to Browns there are partridge coloured, which are much richer in hue.

**Black.**—For reasons which are unknown this variety has never attained the prominence its merits have deserved. Probably this is due to the difficulty of combining bright yellow legs with the black plumage. A suggestion made is that it is wilder by nature than other Leghorns, and less amenable to restricted areas. That, however, is not in conformity with experience. It is a very hardy fowl, has proved itself most prolific as a layer, and retains much of the original type and character of the Italian fowl. This is certainly one of the breeds which appear to have a most promising future, combining striking characters with economic qualities.

**Buff.**—By reason of the difficulty in securing a good-coloured Buff, and to the patchiness which is found in both sexes, this variety has never become popular either for exhibition or production. When a sound, even colour is obtained these birds are very attractive. In







EXCQUER LEGHORN COCK  
(Bred by Mr. Robert Miller, Denny, N.B.)



EXCQUER LEGHORN HEN  
(Bred by Mr. Robert Miller, Denny, N.B.)

all breeds and varieties where colour is the chief consideration economic qualities are overshadowed. Buff Leghorns are active and good layers.

**Pile.**—This is a purely exhibition fowl, so named from its having the markings of the old variety of Game fowl with the same designation. It is very pretty when the coloration is good. Few are now met with.

**Duckwing.**—The same is true of this variety which has never been good in type, due to the alien blood already referred to. Of it are two distinct colours, namely, the Silver Duckwing, which has a silver-grey ground, and the Golden Duckwing, which is golden bay.

**Cuckoo.**—Many birds of this class are found in Italy. The plumage is blue and white. It is, as a rule, somewhat smaller than the other varieties of Leghorns. Evenly marked specimens are not easily obtained. The hens are good layers. The legs are lacking in depth of colour, as there is a tendency to mottling on legs and feet. Formerly a fair number were bred for exhibition, but they are now seldom seen.

**Blue.**—As in other races of fowls, blue is a difficult colour to secure and maintain even in an old breed such as the Andalusian. That, however, is the fascination for exhibition breeders, many of whom prefer striving for what is abnormal. With these the harder the feature to obtain the greater their pleasure when, occasionally, success is achieved.

### EXCHEQUER LEGHORN.\*

Nomenclature : In all countries, Exchequer Leghorn.

Variety : One.

Classification : Exhibition, Non-sitting.

Colour of Flesh and Skin : Yellow.

Colour of Legs and Feet : Yellow.

Colour of Egg-shells : White or very slightly tinted.

**Origin.**—This variety appears to have been a sport from the White Leghorn on the farm of Mr. Robert Miller, of Denny, Scotland. Variations from the normal type and colour are occasionally met with in all races of fowls. These are generally got rid of, even though, as pointed out by the late Charles Darwin many years ago, they are the more vigorous, for Nature in this way is seeking to preserve the vitality of stock. The White Leghorns from which these birds emanated were, in the first place, obtained from a farmer living in the same district of Scotland. Mr. Miller is of the opinion that, although apparently pure



Leghorns, there had been some years previously an infusion of Black Minorca blood, and that this was responsible for the chequered or mottled markings. Out of four thousand White Leghorn chicks bred by him in 1904, four or five came with markings which were distinctive from the general flock. Since the year named no alien blood has been introduced. For that reason, and care in selection, the Exchequer has been true to the Leghorn type.

**History.**—In the following year the birds referred to were mated, and a considerable number of chicks bred from them, many of whom reproduced more or less truly the colour of the parents, indicating that they were something more than mutants. It was also found that these were very hardy and easy to rear, probably due to the fact that they had been bred at a high, exposed elevation, open to cold north and east winds. The hens proved to be heavy layers. The name selected by the originator was a happy thought. It indicated both the 'Checks' in plumage and the contribution made by them to the pocket of the breeder. In 1907 the variety was introduced to the public, since which year it has made steady progress in popularity.

**Economic Qualities.**—As with all members of the Leghorn family this variety is first and foremost remarkable as a layer. It has proved successful when bred for exhibition, in the hands of amateurs and small breeders, and when kept by commercial poultry farmers, by all of whom excellent egg records have been attained. In 1913 an average of 204 eggs was recorded in the cold, exposed, moist Island of Skye. Later, in South-west Scotland, an average of 228 eggs in twelve months was obtained. And in 1924 a breeder living on the high lands of North Yorkshire is stated to have secured an average of 291 eggs from ten pullets. The eggs are of an excellent size. From the evidence available it is apparent that these birds are possessed of great vitality, and that they are eminently suited to more exposed conditions where, as elsewhere, they have proved to be good winter layers. Meat qualities are fair.

**Description.**—The Leghorn carriage and type is fully maintained in the Exchequer, together with single comb, white earlobe, and yellow legs, feet and skin. The hens are characterised by breadth and depth in the posterior region, indicative of egg capacity. In colour of plumage the male has very dark neck and saddle hackles, each feather





SINGLE-COMBED ANCONA HEN (ENGLISH)  
(Bred by Mr. W. Wilson, 107, Convamore Rd., Grimsby)



ROSE-COMBED ANCONA HEN  
(Bred by Mr. A. Rice, Wollaston, Wellingborough)  
Won Crystal Palace in her 7th and 8th year. Also Club Show.

Photos, A. Rice



with a white central streak ; the breast, wing-bows and thighs are white evenly mottled with black ; the tail feathers and hangers, except the outer sickles which are white, tipped with black, are black with white markings. The hens have a white ground colour with crescentic black markings. Weights : males, up to 6 lbs. ; females, up to 5 lbs.

### ANCONA.\*

Nomenclature: *English, German, Danish, Italian, Ancona ; French, Ancone ; Hungarian, Anconai.*

Variety : One.

Classification : Non-sitting.

Colour of Flesh and Skin : Yellow.

Colour of Legs and Feet : Yellow, mottled with black.

Colour of Egg-shells : White.

**Origin.**—That the Ancona is a variety of the common Italian fowl, widely distributed throughout Central Italy, that is, the Leghorn, is evident. Out of its native land it has been separately classified. It would appear that fowls of this type were imported at least two decades before the advent of the Leghorn, for Mr. Harrison Weir states (1) that specimens were exhibited under this name in 1851, 1852, 1853 and 1861, in the latter year at Birmingham. From descriptions given of the birds at that show (9) these were true Anconas. The name has been given owing to the fact that fowls of this type are common in the district of Eastern Italy around the port of Ancona, whence they would be shipped in the first instance. At one period there was a large exportation of eggs from this part of Italy. Mr. A. P. Tomassini, British Consul at Ancona, has stated that this class of fowl are common in the district, and suggests that they were due to a crossing of the Tuscany fowl upon the common fowl of the province. He does not, however, say anything about the latter. If that were correct the comparatively slight differences between the Ancona and the Leghorn would be explained, even to the chief difference, namely, temperament. In the earlier editions of Lewis Wright's "Book of Poultry," (5) it is suggested that "the origin is to be found in accidental sports of this colour from the crossing of Black and White Minorcas." That suggestion was based upon incomplete evidence. In later editions acknowledgment was made that it was erroneous. The name Ancona was, however, undoubtedly given to birds crossed in

\* Plates XV and XVI.

this manner, many of which were found in Devonshire, the home of the Minorca, and to which Lewis Wright was probably referring.

From what is apparent in earlier books and writings it seems probable that almost any bird of the Mediterranean type, if mixed black and white in plumage, was given the name Ancona. As we pointed out many years ago (10), 'in the first place, an Ancona has not cuckoo markings, as would be produced by crosses between the Black and White Minorca; and, in the second place, no crossing between the varieties named would give the yellowish legs and skin which are features of this breed. We must, therefore, look elsewhere for the origin, and we think that the explanation will be that the Leghorn is either its source, or that both Leghorns and Minorcas have come from the same stock.' Later observations made in Italy have confirmed that opinion, which is generally accepted.

**History.**—There is no record as to who first imported the Ancona into Britain in the mid years of last century. About 1880, so far as can be traced, other birds were brought over by a Captain Rowse, and later, in 1886, Mr. A. W. Geffcken, then living at Southampton, obtained other specimens direct from Italy. These were true to type, differing from the Leghorn in that they had mottled yellow legs; they proved to be hardy and prolific layers, and were taken up by a number of breeders, among whom was Mrs. Bourley, of Frankley, near Birmingham, who, living in a cold, high and exposed situation immediately north of the Lickey, found them a valuable breed for egg production. Further importations afterwards took place, and in 1898 a club was formed, which is still in existence. Unfortunately, this was dominated by fanciers who cared little for the economic qualities. As one of those chiefly responsible for the change, said (11), 'The profits accruing from a bird that can win a pocketful of money in the season are far greater than a basketful of eggs at a penny a piece.' Moreover, crossing with the Minorca was resorted to in order to enhance size of body and comb; also to fix the white earlobe, which was not a character of the original type.

It is stated by Mr. John H. Robinson (3) that 'Anconas were first brought to America from England, about 1888, by Francis A. Mortimer, of Pottsville, Pennsylvania.' He died soon afterwards. In 1906 Mr. H. C. Sheppard, of Berea, Ohio, made further importations,







AMERICAN ANCONA COCK AND HEN  
(Bred by Mr. H. Cecil Sheppard, Berea, Ohio, U.S.A.)

and has done much to secure for them a fair measure of popularity. We found in 1918 that many were bred in Southern California.

**Economic Qualities.**—The Ancona, like its relative the Leghorn, is pre-eminently an egg-producer, and is one of the best layers we have under normal conditions. The eggs, which are white in shell, are well up to standard weights. The chickens are very precocious, and are speedily able to look after themselves. They are vigorous, active, rapid in growth and good eaters, though by no means heavy food consumers. Maturing quickly, the pullets commence laying early, if hatched at the right season of the year, and are found to be good winter layers if properly cared for, due to their activity and foraging propensities. For meat properties they are mediocre, except as milk chickens. They are non-sitters. The Ancona is active in habit, thrives better at liberty than in confinement, though in this respect a change has been noted in recent years, and is very nervous in temperament, especially when disturbed by strangers, for which reason they are thought to be wild. It is fortunate that the colour of plumage has not conduced to extreme exaltation of characteristics. Records in Laying Trials have shown that the egg capacity is high. Selective breeding, however, in that direction has not been very generally adopted.

**Description.**—In type of body the Ancona resembles the Leghorn, with one exception—namely, that it is not so full in front, thus presenting a somewhat slighter appearance. The legs of imported birds were yellow mottled with black, which is doubtless due to the birds having so much black in the plumage. There has been a tendency to eliminate the black upon the legs, which is to be regretted, as those specimens so marked are generally the more vigorous. The beak is fairly long and fine, and yellow with darker shadings. In the original stock the earlobes were red or creamy. Both in Britain and America white is now insisted upon for exhibition, and the lobes are often too large, both of which are mistakes. In colour the body plumage of both sexes should be of greenish black with many of the feathers tipped with white to give a mottled appearance. In America breeding has been for a darker bird with less in the way of mottling than is general in Britain. At one time the tail sickles were white with black tips. This has, in both countries, been changed to black with white tips,



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and the wings are marked in the same manner. Weight: males, in Britain 6 to 7 lbs., in America  $4\frac{1}{2}$  to  $5\frac{1}{2}$  lbs.; females, Britain 5 to 6 lbs., America,  $3\frac{1}{2}$  to  $4\frac{1}{2}$  lbs. For production increase in size is undesirable.

### VOLDARNO.

Nomenclature: *Italian*, Voldarno.

Varieties: Black, White.

Classification: Non-sitting.

Colour of Flesh and Skin: In Blacks, grey; in Whites, yellow.

Colour of Legs and Feet: In Blacks, dark grey; in Whites, yellow.

Colour of Egg-shells: White.

**Origin.**—At an Exhibition held in Rome in 1903 classes were given for a breed which we had not heard of before, called the Voldarno, but respecting which we were able to obtain very little information. The Marquis Trevisani, President of the Italian Poultry Society, thus speaks of it (12), 'The brothers Grilli, of Florence and other Tuscan poultry-breeders have launched this breed, which, in my opinion, is merely the common fowl of Tuscany selected and made uniform in coloration.' It is probable that this and the Leghorn own the same ancestry.

**History.**—Other than the above we have not been able to obtain any direct evidence, more than that the breed is kept to a very limited extent.

**Economic Qualities.**—The birds are small in size of body, adult cocks weighing about 5 lbs. They are stated to be very hardy, and the hens remarkable layers. It is claimed that they fatten well. The standard of table poultry in Italy is not, however, more than low.

**Description.**—In general appearance the Voldarno resembles the Leghorn, except that they are fuller in front. The combs are single and small. It is not improbable that these Tuscan fowls are the basis of Black Leghorns.

**Varieties.**—So far as our observations have gone there are more Black than White Voldarnos. The last named may be sports from the Black. On the other hand, it may have arisen from crosses with the White Leghorn, which is probable.



## POLVERARA.

Nomenclature : *Italian*, Polverara, or Padovarna Polverara.

Varieties : Black, White, Cuckoo, Gold, Silver.

Classification : General Purpose.

Colour of Flesh and Skin : White.

Colour of Legs and Feet : Dark green.

Colour of Egg-shells : White.

**Origin.**—The breed which we call the Polish, in other countries named the Padoue, is very widely distributed upon the Continent of Europe. Whether the Polverara is a direct descendant or not does not appear to be known. In shape, crest, softness of feather and appearance it has points of resemblance to the Crèvecoeur. In Italy the relationship is generally accepted.

**History.**—‘The Polverara is indigenous to the province of Padua, which for the production of eggs and poultry is one of the most important provinces.’ (12) At one time pure specimens of the race were very scarce, as they could only be procured from a few breeders at Polverara, a village near Padua. Since that time they have been distributed, and much has been done to improve by careful selection.

**Economic Qualities.**—The Polverara is said to be very hardy, is tame and precocious. The chicks, however, appear to feel cold considerably, which may be due to methods of breeding and of treatment. The hens are stated to be prolific layers, which is true of Italian fowls generally, and only desire to sit twice in the year. The soft feathers are highly esteemed for domestic purposes.

**Description.**—The body is long, deep and round, with a short back, standing upon legs of medium length; the neck is thick, well covered with abundant long hackle; head neat, surmounted by a full crest, well divided and almost straight; the comb, which consists of two small horns, stands out prominently in front of the crest; wattles small, and, like the comb, bright red; earlobes white; tail small and forked; toes four. Weight : males, 6 lbs.; females, 4½ lbs.

**Varieties.**—Blacks are most common and generally preferred. They are of a brilliant colour, with blue-bronze reflections. Whites are rare, as are Cuckoos. The Golds and Silvers are occasionally met with, probably due to other crosses.

## PADOVANA.

Nomenclature : *Italian*, Padovana, or Giant Padovana.

Variety : One.

Classification : Table.

Colour of Flesh and Skin : White.

Colour of Legs and Feet : Rosy-yellow.

Colour of Egg-shells : Tinted.

**Origin.**—According to the Marquis Trevisani, this breed was created in Italy by a cross in 1850 between a Cochin cock and a hen of the common Polverara race. At first, as might be expected, the results indicated a lack of uniformity in plumage, and it has required years of selective breeding to attain purity of race, and to eliminate excessive features of both parents. 'It was only in the year 1875 that the breed could be considered as properly established, and from thence forward perfected.' (12).

**History.**—From what we have been able to learn, the progress made by this breed is considerable, more especially in Northern Italy where table poultry, which has good flesh qualities and size of body, is in demand. Whilst not a first-class fowl on the table, it is a distinct improvement upon the birds generally offered for sale.

**Economic Qualities.**—These fowls are large, carrying an abundance of flesh, which is said to be good in quality. The writer already quoted states (12) that 'the ease with which they are fattened renders the breed still more valuable, for the fat, which forms in great abundance, is very delicate, and in many dishes it is used as a substitute for the best Lombardy butter.' The hens are said to be excellent layers of large sized eggs, commencing in November, and sitting but seldom. They are hardy, quiet, and not given to stray, whilst the chicks grow moderately quick. For autumn and winter table fowls they have much to recommend them.

**Description.**—The body is large and well proportioned, showing robustness ; breast, large, well developed and fleshy ; back broad ; neck long, massive and well arched ; head small ; beak, dark, strong and curved ; comb medium in size, triple, with a knob rising at the back ; wattles, long, pendulous and fine in texture ; earlobes, creamy white ; wings, very large and strong ; tail, short, legs, long, but not heavy in bone, with short feathers on the outside, and the skin rosy-







BROWN SICILIAN BUTTERCUP COCK  
(Bred by Mr. M. Denham, Hilton, Derbyshire)



*Photos, A. Rice*

SICILIAN BUTTERCUP HEN  
(Bred by Mr. M. Denham, Hilton, Derbyshire)

yellow ; the plumage is of a metallic black, except on the hackles and wings, which are often golden yellow, though entirely black plumage is preferred. Weight : males, 9 to 11 lbs. ; females, 7 to 9 lbs.

### MAGGI.

This race, of which we have seen specimens in Italy, is not fixed. Those seen by us were like Black-red Game with splashes on the breast. They had a peculiar comb, not unlike that of the Houdan, except that the two parts of the leaf are closer together. One Italian writer thus speaks of them (13) :

‘ This breed is the outcome of some fortunate crosses made by Cardinal U. Maggi between the large Voldarno hens and Brahma, Cochin and Dorking. After a long period of patient and careful selection the breed has become extremely valuable from every point of view, especially as good sitters. The hens, when well nourished and properly kept, give from 130 to 160 eggs in the year. The flesh is good up to the age of ten months. After that age it becomes like that of the large foreign races from which these fowls are descended.’ The birds are large in size, and are said to be very hardy.

### SICILIAN BUTTERCUP.\*

Nomenclature : English, Sicilian Buttercup.

Varieties : Gold, Brown, Golden Duckwing, Silver, White.

Classification : Exhibition, Non-sitting.

Colour of Flesh and Skin : White.

Colour of Legs and Feet : Willow Green.

Colour of Egg-shells : White.

This breed has commanded a fair amount of attention on both sides the Atlantic by reason of its distinctive characters in combination with productivity. As is the case with other breeds which have been obtained from Italy or the northern shores of the Mediterranean Sea its chief quality is as a layer. It is not likely to attain any great measure of popularity from the fact that its exceptional features involve breeding on strictly fancy lines.

**Origin.**—From the fact that the earliest recorded exportation of these birds was from Sicily to America about 1835, it was assumed

\* Plate XVII.



that it was indigenous to that island of Italy. The name given was due to the island where first obtained, to the golden colour of the plumage, and to the cup-shaped comb, which last named is its most striking character. Whatever may have been the case formerly it is evident that the breed is not now kept in Sicily. On several occasions a careful search has been made for good specimens without success. Flocks of these birds, however, are to be found on the mainland.

More recent evidence would indicate that North Africa is the actual place of origin. Professor Ghigi, of Bologna, Italy, informs us that during a visit by him to the Italian colony of Tripoli, which is in North Africa between Egypt on the east and Tunis on the west, he had found many of the fowls of the country with combs similar to those of the Sicilian Buttercup. Considering that for many centuries intercommunications between Italy and Northern Africa have been constant and easy, it is a reasonable assumption that there would be transference in both directions, and, probably in the case of stock, more northward than the reverse. Hence Professor Ghigi's suggestion is that North Africa is the country of origin. He calls attention to the fact that Sicily is stocked with hens of the ordinary Italian type, and that the Sicilian is only to be found in certain places on that island where it is specially reared. The North African fowls are smaller than the Sicilian Buttercup, and the comb of the former is less fleshy. He suggests that the latter is due to a cross between the North African and the Italian, also stating that in Tripoli and adjacent countries there is much crossing of European races, such as the Leghorn, upon the small African breed. It may be that as the hinterland of Tripoli is explored further evidence will be obtained. This leads to a point for consideration, namely, whether the leafcomb of the Houdan may not be the result of an infusion in bygone generations of the Buttercup, as that is known in France.

**History.**—That the Sicilian Buttercup has been known for centuries is evident from the fact that birds of this type are portrayed in the Gallery Borghese, and the Vatican Gallery, at Rome, and in the National Art Gallery at Florence. Some of these paintings are of the Sixteenth Century. Mr. Louis A. Stahmer writes (14) that the first specimens were taken to America from Sicily in 1835, and were bred to a limited extent for about thirty years, after which they became



extinct. In 1892 eggs for hatching were imported to America from which present stocks have descended. In 1907 a measure of prominence was given to the breed as a result of the efforts of Mrs. James L. Dumaresq, of Easton, Maryland, whose husband had been in the American diplomatic service. She states that 'It was on the hills overlooking the beautiful city of Florence, at the Villa Ninolini, the summer home of my late husband, that the Sicilians first attracted his attention. The chicks were so pretty and tame. The most pleasing feature, however, was the abundance of delicious eggs for the table.' In 1912 the American Buttercup Club was formed, and has been able to secure for the breed a fair measure of popularity. Specimens were exported to Britain in 1910, and in 1913 Mrs. Colbeck imported others. Soon afterwards the (English) Sicilian Buttercup Club was instituted, with the result that these birds are now exhibited at many of the leading shows. They do not, however, appear to have made progress in other countries.

**Economic Qualities.**—Buttercups are excellent winter layers. They do not, however, produce so heavily as other breeds in the Spring months of the year. A number of high records have been made, indicating an undeveloped capacity. The eggs are well above the average in size, and are of good flavour. In size of body these birds are larger than Leghorns, carrying a fair amount of flesh, which is well distributed, and is fine in texture and flavour. The birds are very hardy, tame, and can be restricted by low fences.

**Description.**—There is much opportunity presented for skill in breeding the Buttercup, which is uncertain in colour of plumage and has a strong tendency to variation. Hence the multiplication of varieties. Had there been concentration on one or two of these probably the progress made would have been greater than is the case. The body is moderately long, round and deep, with breast carried well forward. Neck, thighs and shanks are moderate in length. Toes (four) straight. Hackles, wings and tail are full and large. In the American Standard the almond-shaped ear-lobe is given as white; in the English more than one-third white is stated to be a serious defect. The main feature, as already mentioned, is the comb, which consists of a single leader from base of beak to a cup-shaped crown, set well on centre of the skull, and surrounded by a circle of medium-

sized, regular points. The central cavity is deep and should not have any spikes. The comb should be medium in size and fine in texture. Weights : male,  $5\frac{1}{2}$  to 6 lbs. ; female, 4 to 5 lbs.

**Varieties.—Gold :** Male, body colour light bay ; fluff rich bay shading to light ; head, neck, shoulders, wing-bows and back, orange red ; tail, black with greenish-black coverts ; Female : chiefly golden buff, with black spangles on breast and wings ; tail, dull black.

**Brown.—Male :** back, shoulder, coverts and wing-bow, deep crimson or maroon ; breast and under parts, glossy black ; head and hackles, orange red, striped with black ; saddle, orange red ; tail, black glossed with green. Female : body and wings, rich brown pencilled with black ; hackle, golden yellow broadly striped with black ; tail, black pencilled with brown. In both sexes undercolour slaty-blue, in some cases changing to light buff.

**Golden Duckwing.—Male :** back and saddle, maroon to orange, shading to cream ; breast and underparts, black ; neck hackle, white with cream tinge ; saddle hackles, creamy white free from striping ; tail, black with green sheen. Female : back, wings, sides and saddles, slate-grey pencilled darker grey or black ; breast, deep salmon, grey on thighs ; neck hackle, white with fine black or grey stripes ; tail, black with grey pencilling on top feathers.

**Silver.**—Silver white with black tail.

**White.**—Pure white throughout.

### SICILIAN FLOWERBIRD.

For some years an attempt was made by a limited number of breeders to discriminate the Brown Buttercup under the above name. In view of the fact that a considerable measure of success was attained in respect to the plumage colour, in 1922 the English Poultry Club accepted the Flowerbird as distinct. The Standards adopted for these and the Brown Buttercups are practically the same, except that the colour of the male in the former is rich mahogany instead of orange red in the latter, and in females salmon red running into maroon instead of light golden buff. As might have been anticipated the effort to create a distinct breed has not met with success.

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— CHAPTER IV  
FRENCH RACES OF FOWLS.





## CHAPTER IV

### FRENCH RACES OF FOWLS.

|            |                 |                |
|------------|-----------------|----------------|
| BRESSE.    | CAUX.           | CAUSSADE.      |
| LA FLECHE. | COURTES PATTES. | FRENCH CUCKOO. |
| DU MANS.   | HOUDAN.         | BOURBOURG.     |
| CRÈVECŒUR. | FAVEROLLES.     | ESTAIRE.       |
| CAUMONT.   | MANTES.         | HERGNIES.      |

For centuries the breeding of poultry has entered into the rural economy of and been ubiquitous throughout France. The flesh of poultry has formed part of the diet of people of all classes to an extent which is not met with in any other country except Belgium. So far as our observations have been made, until the later half of the Nineteenth Century, when poultry breeding on practical lines developed as an important branch of human endeavour in almost all sections of the globe, France occupied the premier position, equalled in degree by Belgium, in respect to the breeding and management of poultry by the ordinary farmers, who found in this branch of stock a steady source of income from the sale of chickens and eggs. Selection of breeding stock on definite lines was adopted in almost every district. Variation is a law of life. Such variations as were produced naturally have been fixed. There is scarcely any section of France where, in one direction or another, a breed or breeds are not to be found specially suited to the district. Hence there is great diversity. The French people have apparently given great play to natural influences in the evolution of the different races. They have in the fixing of characters and types regarded the development and maintenance of productive qualities as supremely important. Hence the majority of French poultry, even though the type is well defined, do not present the same finish as found in exhibition stock. The main object has been to conserve

and improve the table properties, with egg production in the second place. Fixity of external characters was adopted because by so doing the perpetuation of such properties is best secured. Breeding for exhibition in France has not been carried to the same extreme as in Anglo-Saxon countries and in a few others.

It is too early to discern what will be the permanent effect so far as breeds of poultry are concerned of the Great War of 1914-1918. In those provinces which were war-swept it is possible that there may be a great change in this direction, as a result of introduction of other races during the time of reconstruction. The natural conservatism of the French peasantry may, however, be indicated by preservation of types with which they were familiar.

#### BRESSE.\*

Nomenclature : In all countries, Bresse or La Bresse.

Varieties : Black, White, Grey, Blue.

Classification : Table.

Colour of Flesh and Skin : White.

Colour of Legs and Feet : Blue-grey.

Colour of Egg-shells : White.

**Origin.**—The breeds of fowls which are met with on the northern shores of the Mediterranean Sea have much in common so far as shape of body and carriage are concerned. That is true of the Bresse as of the Italian and Spanish races. Probably all had a common origin, though there are no records available as to when or how migrations took place. Mr. Verrey suggests (1) that ‘the Dorking played a rather prominent part in the manufacture of the Bresse.’ Such supposition has no justification. Among French writers there is considerable difference of opinion. Perre de Roo says (2), ‘It is, in all probability, the result of a cross between the common fowl and the Andalusian,’ which lacks any confirmation. The same view is held by M. Cornevin. (3) If we accept the evidence of structure, size and shape of body, together with vigour of constitution and general activity, the Italian influence is apparent. We, therefore, agree with M. Remy Saint-Loup, who says (4) : ‘In form these birds are related to the Leghorn.’

Considering that the Bresse country, to the south of Burgundy, is on the north side of the Alps, and that there has been for ages

\* Plates XVIII and XIX.







WHITE BRESE HEN (FRENCH)  
(Bred by Madame Vautier, Domaine de Forest, par Consolre (Nord) )  
3rd Prize Paris Exhibition



WHITE BRESE HEN (ENGLISH)  
(Bred by Mrs. Onslow Piercy, Burstton, Diss, Norfolk)

Photo, A. Rice

direct communications between the two countries as it was on the Mont Cenis routes across the mountains, it may be accepted that the Bresse was due to the crossing of Italian fowls upon the common stock of the district. Its special quality and distinctive characters may be attributed to generations of breeding and the nature of the climate and soil. Why, however, this type should have been restricted to the Bresse country cannot be explained, nor yet why these are not found in other parts of France except by transference.

**History.**—The Bresse country has been famous for its poultry for a very long period. It is stated that fowls of the type and quality named have been bred for more than a hundred years. Upon the Paris and other great French markets Bresse fowls hold the premier position for quality and price. Large numbers of the dead birds are distributed in southern France, Switzerland and Northern Italy. High prices are obtained for fine specimens in the district itself, that is by reason of the flesh qualities. We have found by personal observations in the Bresse country, having traversed it from one end to the other, attended local markets, and visited several of the leading producers, that extreme care is taken in maintaining the purity of the race. Crosses have been tested, the result of which, however, was not satisfactory.

In 1895 we imported a pen of White Bresse after a visit paid to the district where they are bred, finding them not only fine in the quality of flesh but excellent as layers. Since that time the breed has made steady, if slow progress in popularity in Britain. They do not appear to be known in America or the Antipodes.

**Economic Qualities.**—The Bresse is medium in size of body. At first sight it might be regarded as small for a table breed. It, however, fattens to a remarkable extent, increases greatly in the volume of flesh, and its fineness of bone is to the advantage of both producer and consumer. Gourmets recognise that it occupies the first rank among table chickens. The flesh is most delicate, very abundant, and is well distributed over the body, and, when roasted carefully, eats with a shortness which we have not met with in any other breed of fowl. In a well-fatted bird the thickness of meat on the breast is remarkable, whilst in colour of flesh and delicacy of skin it has no superior. The hens are moderate sitters, but excellent mothers. We have had hens



which never became broody. It has been found, as proved by records in Laying Trials, that the Bresse hens in Britain are exceedingly good layers of large, white-shelled eggs. A further point is that they are hardy, and the chickens grow rapidly. The combination of meat and egg qualities, in which some of the heavy laying races are deficient, is important, and should make for their wider distribution.

**Description.**—The body of the Bresse fowl is of medium size, well built, long, the chest carried prominently forward, moderately deep and broad; the appearance indicates lightness of frame rather than massiveness of structure; the neck is short, full and well covered with hackle; the head long and fine; beak short and strong; the comb is single, carried upright in the cock and falling over in the hen, high and long, reaching well over the beak in front and the neck behind—in fact, resembling closely that of the Leghorn, though much finer in texture, as are also the long wattles; the face is clean and red, the eye red, and the earlobes white and rather large; legs medium in length, dark blue-grey in colour, with four toes on each foot; the bone is fine and very light; tail in the cock is large and ornamented with long sickles; the carriage is graceful and sprightly. In temperament the birds are rather excitable. Weight: males, 6 to 6½ lbs.; females, 4½ to 5½ lbs.

**Varieties.**—The leading subraces are the Grey and the Black. In addition pure White and Blue are met with. The White have been most popular in Britain.

**Grey** (*Variété de Bourg*).—Generally regarded as the original type, on what authority we have not discovered. In the male the head, neck and breast are white; the back is white, ticked with grey, more especially close to the neck, which markings are often hidden by the neck-hackle; wings white, with two very dark grey or black bars on the primary and secondary feathers; the tail proper is black, the sickles having a broad white edge on both sides; comb, face and wattles, bright red; earlobes creamy white; legs and feet blue-grey.

**White.**—This variety, which is due to sports from the grey, is most pleasing in appearance, breeds true, and has proved most prolific in Britain, where it is the most popular variety.

**Black** (*Variété de Louhans*).—Is chiefly bred in the district around Louhans, where we have seen large numbers of these fowls. The







GROUP OF BLACK BRESSE  
(Bred by the Countess of Strafford, Wrotham Park, Barnet, Herts)

plumage is a deep metallic black ; earlobes snow white ; legs and feet deep blue.

**Blue.**—Of more recent production and not so general. It may be the result of crossing between the Grey (or White) and Black varieties, or Andalusian blood has been introduced, which would explain the statements made by French writers as to Spanish influence in the Bresse fowl.

### LA FLECHE.\*

Nomenclature : In all countries, La Fleche.

Variety : One.

Classification : Table.

Colour of Flesh and Skin : White.

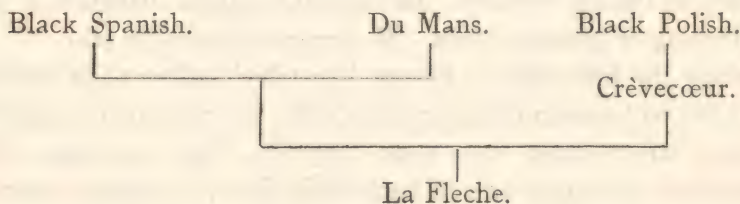
Colour of Legs and Feet : Dark slate or black.

Colour of Egg-shells : White.

This race of fowl has been bred for a long period of time in the Valley of La Sarthe, north of the River Loire, in the Department of that name, of which La Fleche is one of the leading towns. M. Jacque states (5) that the breed has been known since the fifteenth century, but that it is believed to be much older. M. Perre de Roo says (2) :

‘Its origin is very obscure ; but from its high carriage, its action, the large white earlobes, and the trace of crest which crowns the head, it may be supposed to have issued from a cross between the Spanish fowl and the Polish or Crèveœur.’

Other writers support that opinion, which is most probable, even though the whiteness and quality of the flesh are far in advance of any of the breeds named. Such are influenced by the rich pastures of La Sarthe upon which the fowls have been bred for generations, and to the system of feeding adopted. The descent, so far as can be traced, is as follows :



The peculiar comb, noted below, follows that of the Crève, which,

\* Plate XX.



however, may have descended from the Polish. Darwin classes both Crèves and Houdans as sub-breeds of the Polish.

**History.**—We have practically told all that is known of the La Fleche fowl. It would appear that at one period it had a wider distribution than is now the case, as it is not now met with in other districts than La Sarthe. There this breed is regarded as the finest of all table poultry, as it rivals the Bresse in both live and dead classes at exhibitions. In Britain there have been a few breeders for exhibition. As a practical fowl it has never found a place. In France the La Fleche is not matured until it is from eight to ten months old, when the birds fatten splendidly, and the flesh is very fine in flavour and tender, commanding high prices for great festivals such as Christmas and Shrove Tuesday (Mardi Gras).

**Economic Qualities.**—La Fleche in France are recognised as requiring special care as they are not a hardy race. That has also proved to be the case in Britain. M. Lemoine says (6) :

‘The chickens are easily reared during the first few days, but there is a critical time for them to pass at the time of their first moult; the down falls rapidly, and the feathers do not grow quickly; this results in their little bodies not being defended, and they are very susceptible to cold and rain.’

He adds that they must be sheltered during the first six weeks, and that they are most suited to high ground, where there is plenty of sunshine. Speaking of the qualities of La Fleche the same author says that ‘it is remarkable for the fineness of its flesh; both poulardes and capons are very renowned; they are distinguished above all for their quality of fattening, and for the increase of flesh. . . . The hen is a good layer, producing 140 eggs per annum; the weight of each egg is upwards of  $2\frac{1}{4}$  oz., but they rarely sit.’ This is confirmed by the experience of British breeders. In La Sarthe careful attention is paid to the feeding of growing birds. M. Perre de Roo says (2) :

‘During the first eight to fifteen days which follow their hatching they are fed on breadcrumbs steeped in milk, or bread finely crumbled, and soup; after fifteen days upon this diet, they feed upon whole buckwheat or a paste made of buckwheat flour, or ground maize or oats mixed with milk, until they reach the age of seven or eight months, at which age they are submitted to the fattening process.’





CRÈVEŒUR COCK AND HEN  
(Drawing by Mr. J. W. Ludlow)



LA FLECHE COCK AND HEN  
(Drawing by Mr. J. W. Ludlow)



**Description.**—French La Fleche are bred carefully. In some instances a rudimentary crest is met with, but is not general. The body is large, long and deep, with broad breast, and back sloping well to the tail; the neck is long and graceful; the head fine and long, with a corresponding beak, which is dark horn in colour, and surmounted by a horned comb, having two even but somewhat satanic-looking spikes in front, and a small blunt protuberance behind. It is required that the comb should be fine in texture, as indicating flesh quality; the eye is full and red; wattles large; face bare, and with the comb and wattles bright red; earlobes large and white; the legs are long, not heavy in bone, and dark slate or black; toes four; tail long and full, and the sickles in the cock carried well back; the plumage is a beautiful black, with metallic green and violet reflections. Weight: males, 8 to 10 lbs.; females, 6 to 8 lbs. In France these weights are often exceeded. The whole appearance, excepting the comb, is stylish and attractive.

#### DU MANS.

Nomenclature: Mans or Du Mans.

Variety: One.

Classification: Table.

Colour of Flesh and Skin: White.

Colour of Legs and Feet: Dark slate or black.

Colour of Egg-shells: White.

**Origin.**—This fowl is met with chiefly around the town of Le Mans, capital of the old French Department of Maine. Records as to it are very scanty, and we have not discovered the origin. That it is closely allied to La Fleche is evident; in fact, as to shape, colour of plumage, and qualities, the two breeds are very similar, the chief difference being found in the comb. One French author (5) suggests that La Fleche fowls were first bred around Le Mans, which is by no means improbable. It is reasonable to assume that the two breeds were at one time the same, and that breeding to different ideals have made them sufficiently distinct to warrant separate designations. As to how the rose comb of the Du Mans was derived we have no direct indication. It is believed this is due to Hamburgh or other influence, or even as a mutant or sport in the first place. Among fowls bred without very strict selection for racial characters variations frequently

appear. It would appear probable that the Du Mans is the older fowl of that section of France, and that the La Fleche is a variation due to a cross with the Crèveœur.

**History.**—These birds are bred essentially for their meat properties, and are seldom met with outside the Le Mans district. So far as we are aware they have not been introduced into other countries.

**Economic Qualities.**—Formerly there was an important industry in fattening poultry at Le Mans, where birds were produced that were famous for their fine flesh qualities, and which commanded very high prices. These birds were large in frame, fattening well, and laying on a large quantity of beautifully white, fine flavoured flesh. The chickens are very hardy, easily reared, and are characterised by fine bone. The hens are moderate layers, producing eggs well over 2 oz. each. They are non-sitters.

**Description.**—The main variations from the La Fleche are that the comb is rose, very similar to that of the Hamburg, having the long spike behind, but it is somewhat coarser and larger; there is no indication of rudimentary crest; the plumage, whilst black, has not the metallic sheen of La Fleche; and the body is heavier when in lean condition.

### CRÈVECŒUR.\*

**Nomenclature:** In all countries, Crèveœur.

**Varieties:** Black, White, Blue.

**Classification:** Table.

**Colour of Flesh and Skin:** White.

**Colour of Legs and Feet:** In Black and Blue, very dark slate or black; in White, pinky white.

**Colour of Egg-shells:** White.

**Origin.**—That the Crèveœur owes some of its special characteristics to the Polish fowl is evident. There are, however, no definite records upon which reliance can be placed. A statement made in an interesting article published in 1852 on 'Normandy Poultry,' (7) is to the effect that around Cean and in the Department of Calvados, the Polish type of fowl was general. Some of the earlier writers, notably Wingfield and Johnson (8) suggested that it came from Burgundy which is much further south. All, however, regard it as of Polish descent. The birds of the period named were nearer in type to

\* Plate XX.



the Polish than is now the case. The same error is made in the 1854 edition of Moubay. Darwin, as already noted, classed the Crèves and Houdans as sub-varieties of the Polish. M. Perre de Roo says (2) : 'There is very little known as to its origin. It is suggested that it originated in Normandy and Picardy, and that it is named after the village of Crèvecœur, situated between Lisieux and Caen, where we find, however, more Caumont fowls and other varieties approaching more or less to the Crèvecœur than of pure-bred specimens.'

The fact that other classes of fowls predominate in the Crèvecœur district is no indication that the breed did not originate there. Mr. Lewis Wright mentions (9) that at the Birmingham Show of 1855 Black-crested Black Polish were exhibited. The consensus of evidence is that the Crèvecœur is directly descended from the Black Polish which, bred for generations on the rich lands of Normandy with a view to the improvement of table qualities, has been considerably modified, and has resulted in the breed as known in these days.

**History.**—When this race began to assume an individuality, or it was first recognised under a distinct name, are unknown. In the middle years of the Nineteenth Century black fowls of this type were common in the Department of Calvados, where the breeders of larger stock are well known for their skill. Birds of the type named were imported to Britain about 1852, if not before, of which some were black and white, not unlike an irregularly marked Silver Polish (8). They were recognised as distinct from Polish. Many of these earlier birds had white feathers in the crest, and some displayed yellow feathers in the hackles. They were smaller in size of body than now met with. At that time both Whites and Blues were known. Mr. Tegetmeier mentions (10) that 'some idea of the value attached to this breed by our French neighbours may be gained from a statement of the fact that at the first great Agricultural Exhibition in Paris, in 1855, there were two equal sets of prizes offered for the poultry exhibited—the first for Crèvecœurs, and the second for all other varieties taken together.' In Britain the breed secured a moderate amount of favour for exhibition. In that, however, there has been a decline.

**Economic Qualities.**—Although not equal to the Bresse or Fleche for table properties, the Crève is excellent in the quantity and quality of its flesh. At the great Paris and other Exhibitions it is generally



well represented and the specimens displayed are very fine. The hen is a fairly good layer ; the eggs are large in size and pure white in shell. They become broody very seldom, and are classed among the non-sitters. M. Lemoine thus speaks of the breed (11) : ' It is easily fattened, and in all the district around Lisieux, Saint Pierre-sur-Dives and Mezidon, the farmers, market-gardeners and others, breed and fatten this fine Crèvecœur fowl ; also the markets of these localities are largely supplied by them, and the sale of these birds attains a considerable figure. It is there the agents go to buy some of the best fowls for the Paris poultry dealers.' Breeders on both sides the English Channel testify that they are quick in growth, fatten well and make splendid birds on the table, both as to size and quality of flesh. They are, however, found to be delicate in constitution respecting which M. Lemoine says (11) : ' Either by reason of the crest or the conformation of the nostrils, Crèvecœurs are very sensitive to cold mists. Roup is the malady which frequently attacks them.' If that be true in France it is equally so in Britain and other moist climates.

On the other hand it is claimed by Mr. S. W. Thomas that if given a good range the Crève is hardy, which is a most important point. He says (12) : ' I have had pullets laying in snow and frost at five and a half months old, and have killed cockerels weighing nearly 4 pounds, ready for the table, at four and a half months. . . . Their value as a cross cannot well be overstated. They give size, productiveness, and quality of flesh to any breed they may be crossed with.' Mr. Thomas lived in South Wales, on a cold soil and in an exposed position. A crested bird, however, is heavily handicapped.

**Description.**—The body of the Crève is large and square, with a broad breast, carried well forward, a long, straight keel, a broad back and large wings ; the neck is long and well covered with hackle ; the head is long and strong, as is the beak, which is dark horn in colour ; the comb is horned, medium in size, the two points well apart, carried in front of crest, and fine in texture ; wattles medium in size ; on the head is a large crest, not too globular, and rather flat in front ; below the face on either side are full muffs of soft feathers ; earlobe small and white, and covered by the muffs ; the tail large, and carried somewhat high ; the legs are short, firm, long and clean, and the feet have four toes. Weight : male, 7 to 9 lbs. ; female,

5½ to 7 lbs. The entire appearance is bold and the gait graceful.

**Varieties : Black.**—The most numerous. The plumage, including the crest, is bright black, with a good sheen and violet reflections ; beak, dark horn, and the legs and feet black or slaty blue.

**White.**—Over the greater part of the body, neck and tail the plumage is velvety-white, under parts dead-white ; beak almost white ; legs and feet, pinky-white. Chiefly kept for ornamental purposes.

**Blue.**—In plumage, the crest, muffs, neck-hackle, back, wings and tail are dark blue-grey, the rest of the body slate-blue ; beak and legs as in Blacks. Blue is an uncertain colour in fowls, and this variety seldom met with.

### CAUMONT.

The name of this breed is derived from Caumont, in Normandy, on the left bank of the Seine river, below Rouen. It is sometimes called Pavilly. M. La Perre de Roo thus describes it (2) :

‘ The Caumont fowl is a variety of the Crèvecœur differing only in the crest, which is smaller, and by the absence of a cravat (muff). . . . The Caumont is vigorous, does not need any particular care, is never ill, is active, alert, and has no rival as a layer. The frame is as large and the flesh as delicate as the Crèvecœur, from which it has descended, and it inherits all the qualities of that breed. The chickens are easily reared, are extremely vigorous, very precocious, fatten well, and are ready for the table at three months.’

The bone is fine, and the legs dark blue-grey in colour. The hens seldom become broody.

### CAUX.

Also a variation from the Crèvecœur, from which it differs by the absence of crest. It has been developed in the Pays de Caux, which is on the right bank of the Seine river, near the town of Duclair, though bred on both sides the river named. M. La Perre de Roo says that (2) ‘ its plumage is of a brilliant black from one end to the other. It has a small head, a single comb, which is upright, finely serrated and



large in proportion to its size of body ; the earlobes are white, bordered with a blue line ; feet, clean, blue, with four toes on each foot ; the hen is an excellent layer and very hardy ; she sits seldom and badly. The raising of the chickens does not require any particular care. These are fed in Normandy on bread steeped in cider during the first fortnight, after which they are given the same food as adults.'

### COURTES PATTES.

Nomenclature : In most countries, Courtes Pattes ; *German*, Krüper ; *Spanish*, Paticorta.  
 Variety : One.  
 Classification : Table.  
 Colour of Flesh and Skin : White.  
 Colour of Legs and Feet : Dark slate or black.  
 Colour of Egg-shells : White.

Short-legged fowls are met with in many countries. As a rule they receive a limited amount of attention, although their quaintness is attractive, for which reason they are regarded as ornamental. In France the Courtes Pattes (Short-feet) are bred for their flesh qualities.

**Origin.**—Nothing definitely known as to the descent of this breed, which is met with in several departments of France. M. E. Lemoine says (11) that it originated in Maine, in which La Sarthe is situated, and that it has been known there for a long time. Another writer (4) says that 'perhaps they are related to a short-legged race of Camboge,' of which latter we have no information. Fowls with short legs have been known from time immemorial in several parts of Europe and Asia, inclusive of Normandy and Brittany, so that it may be concluded the Courtes Pattes bred in La Sarthe are descended from these, and that by selection the characters and colour of plumage have been fixed. Formerly whites and yellows were met with as well as blacks. Now the latter is the only colour bred pure. Crested specimens have occasionally been seen, indicating crosses with the Crève or Polish.

**History.**—For much more than half a century these birds have been bred pure. The favour attained was due to their fine flesh qualities. The breed was first introduced into Britain in 1879. They have never been in more than a very few hands.

**Economic Qualities.**—The flesh is very delicate and beautifully white, as is the skin. In the most expensive Paris restaurants the dish







HOUDAN HEN (FRENCH)  
(Bred by M. Pallery, Abbeville, Somme)



HOUDAN COCK (FRENCH)  
(Bred by M. Goujon, Langeais, Indre et Loire)  
1st Prize Paris Exhibition

named *poulet à la reine* (Queen's fowl)—a favourite with *gourmets*—is that of the Courtes Pattes. The fowls are very hardy, the chickens precocious and quick growers under favourable conditions. For ordinary markets the small size is not a recommendation. The hens are fair layers of somewhat small, white-shelled eggs, and are excellent sitters and mothers.

**Description.**—In body the Courtes Pattes cock is long and deep, the breast prominent, with large, powerful wings carried rather low; the neck is short and thick, well covered with hackle; head long and neat, ornamented with a large single comb, regularly indented, upright in the male, falling over in the female; beak short, slightly hooked, brown in colour; wattles large and long; eye bright red and bold; earlobes large, white in colour; tail large, well furnished with sickles in the male, and carried high; legs are very short, giving an almost duck-like appearance to the bird; four toes on each foot; legs and feet dark slate in colour; the plumage is entirely black, with bright green reflections; the general appearance is vigorous and haughty. Weight: male, 3 to 4 lbs.; female,  $2\frac{1}{2}$  to  $3\frac{1}{2}$  lbs.

### HOUDAN.\*

Nomenclature: In all countries, Houdan.

Variety: One.

Classification: Non-sitting, Eggs and Flesh.

Colour of Flesh and Skin: Creamy-White.

Colour of Legs and Feet: Pinky-white, mottled with blue or black.

Colour of Egg-shells: Dead white.

There was a time in the latter half of last century when it was confidently anticipated both in France and Great Britain this breed would become the most popular of all races of fowls kept for production. It, however, has failed to attain that position due to the introduction of other breeds more prolific as egg producers.

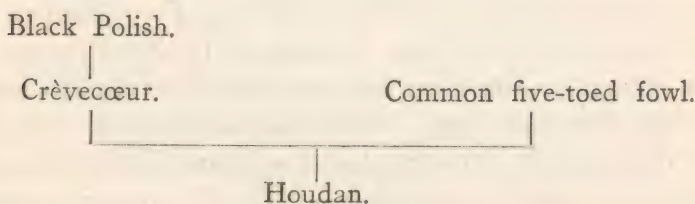
**Origin.**—Numerous suggestions have been made as to the descent of this complex breed, without any evidence. From the fact that it has five toes on each foot, the Dorking, or its French counterpart, has been claimed as one of its ancestors, and the crest has suggested descent from the Polish (13). Later observations have thrown some light on the question. That the breed originated in the Seine-et-Oise department of France seems to be undoubted. At one period it was



almost universal in one section of that country. M. La Perre de Roo says (2) that 'some authorities suggest it has descended from the Padoue (Polish), from which it inherited the crest ; and also the Dorking, from which it has derived the fifth toe. All is pure conjecture without any positive proof. Its relationship with the Dorking is very doubtful, because it has neither the comb, the plumage, nor the form of that breed. It is certain that the Houdan has existed in Beuce for centuries, taking its name from the small town of Houdan, chief of the canton, arrondissement of Mantes, Department of Seine-et-Oise.' Formerly large numbers of fowls of this race were there raised for the Paris and London markets. M. La Perre de Roo adduces no evidence for the antiquity of the breed.

As already noted (see Crèveœur above) the Polish fowl was at one time common in Normandy. Probably the descent of the Houdan was through the Crève, not direct from the Polish. That this influence has been used in later years, both in France and England, is undeniable. Further, French authorities claim that the Dorking was received into Britain from Normandy, where it had been bred since the Roman occupation of Gaul, and that five-toed fowls of this type have been known in Northern France for many centuries. M. La Perre de Roo refers (2) to a 'race commune a cinq doights' (common fowl with five toes) as follows : 'The breed is characterised by the peculiarity of a fifth toe which she carries on each foot, and is found in the neighbourhood of Courtrai, Bruges, Ghent and other Belgian towns, and also in the northern departments of France, where it has a high and well merited reputation.' The five-toed fowl is of wider distribution than is generally recognised or known.

Taking the evidence so far as obtained, except as to the comb, as already indicated (Sicilian Buttercup, Chap. 3), the following table of descent may be accepted :



Since 1878 there has been a further infusion of Crèveœur blood, as revealed by the darker plumage which for a time prevailed. M. Lemoine says (11) that Light Brahma influence has been employed to increase the size of body. That may be true in France. In Britain the Crève and the Dorking have alone been used.

**History.**—The Houdans apparently were introduced into Britain about 1850, when they were known as the Normandy fowl. Of these Wingfield and Johnson thus speak (8): ‘The old birds are entirely speckled in black and white; they have a small erect top-knot, not drooping backwards like a lark-crest. The plumage of the male bird is much darker than that of the hen. In shape they are lengthy, but become contracted towards the tail. The cock’s tail is of great length; his comb and wattles are also of large size. The chickens are very peculiar, having at first perfectly black backs and white breasts,’—a characteristic of Houdan chicks—‘but they gradually become speckled like the old birds. They have five claws, and the skin of the leg is pied black and white.’ These birds are mentioned under the same name by Moubray (edition 1854), Ferguson, and other writers of that period. No reference, however, is made to the shape of the comb, which is a fixed character of the breed. Descriptions, however, were not very precise. They were first brought prominently forward by Mr. Geylin in 1865, in a pamphlet entitled ‘Poultry-breeding from a Common Point of View,’ in which it is stated that they have a triple comb, ‘the outsides opening like two leaves of a book, and the centre having the appearance of an ill-shaped strawberry’—the first reference to this peculiar form we have traced. In the first edition of Wright’s “Book of Poultry” (1874) it is stated that ‘when first imported the fifth toe was very uncertain,’ and in a later edition (9) the late Mr. S. W. Thomas says that ‘twenty years ago a leaf-comb was quite the exception.’ We bred Houdans in 1875, and then the leaf-comb as also the fifth toe, were general. As indicated above it is probable that the comb was due to a cross of cup-combed birds such as the Sicilian Buttercup. The Houdan appears to have first been imported into America in 1865.

**Economic Qualities.**—Had it not been for the crest the Houdan would have become more popular in Britain by reason of its all round qualities. It is a good layer of large-sized eggs, and makes an excellent



fowl on the table, though in neither direction does it equal the specialised breeds. In a moist climate crested fowls need special care in that they should be sheltered during wet weather, as rain, passing between the feathers of the crest, induces colds. Hence the great blunder made by English exhibitor-breeders in striving to greatly increase the size of crest, which is in many instances twice the size of that found on the French birds. So far as the last named are concerned M. Lemoine says (11) :

‘At Houdan a large portion of the eggs are hatched by turkeys, and breeders regularly compel the turkey-hens to hatch when required. The Houdan chicks are very precocious, and they fatten well at the age of four months. The food employed is generally barley meal mixed with milk, but the fattening is not pressed to a very high extent. The breeders seek, above all, what they call the “soft pullet,” which sells easily and well.’ Hatching by turkeys is not practiced to the same extent as formerly, and is being displaced by incubators.

At one time Houdan fowls were almost universal in the district named, but are less seen than formerly in spite of their quickness of growth, light bone and excellent flesh qualities. Hatching usually extends from October to March. The following notes as to the method of feeding are by M. Lemoine (11) :

‘The food employed for chickens consists of stale bread crumbs mixed with hard boiled eggs and cooked rice, and plenty of boiled milk, which, however, is often given with bread alone. This food is continued for eight to ten days, when the eggs and rice are stopped, and after that time fine barley meal mixed with skim-milk is given alone. Boiled milk, however, is continued several times per day during the next three or four weeks, which is found very appetizing and beneficial. . . . At the age of three and a half to four months the birds are fatted.’

For crossing purposes the Houdan is most valuable. Some of the best layers we have known were Leghorn-Houdans. Excellent table chickens are produced by mating the Dorking or Indian Game or Wyandotte with this breed. Usually the smaller sized Houdan hen is the most prolific layer. Unfortunately the Houdan when kept in confinement is very prone to the objectionable habit of feather-eating.

**Description.**—So far as the French Houdan is concerned we quote from M. Lemoine (11) :



'The Houdan cock has a fine presence, somewhat proud, carrying the head high; beak is a little curved; breast large; feet short, strong, carried widely apart, and with five toes, of which the three anterior rest upon the ground, and the two hind-toes are well divided; it carries a crest of fine feathers, falling backwards; the whiskers are fully furnished, the beard standing well out; the comb is fleshy, and represents the shell of an open mussel, a little serrated at the edges; in the middle of the two parts of the comb there is a third rudimentary comb; the wattles are long and red; earlobes white, short, and covered by the whiskers; plumage, black and white mixed, regularly marked, black and white, not grey.'

The legs are pinky-white, mottled with black. The Houdan hen is in all respects similar to the cock, with the usual differences of sex. English Houdans have been considerably modified in some characters, notably the comb which is more defined, and the crest is very large in comparison with that usual in France. In all cases there is a tendency to incline backwards, and thus to fully expose the comb. Instead of the scanty crest seen upon the French Houdan, there has been a great increase in size, and it is more globular. British Houdans are generally darker in plumage than the French. At one time the legs had a tendency to be too dark due to the crossing referred to. These should be pinky-white, lightly mottled with blue or black. Weight: males, 7 to 9 lbs.; females, 5 to 7 lbs. An undue increase in size would be undesirable.

In America a White Houdan has been accepted in the Standard, but has attained no prominence. It was the result of crossing a White Polish with the ordinary Houdan.

### FAVEROLLES.

Nomenclature: In all countries, Faverolles.

Varieties: Salmon, Light, Black.

Classification: General Purpose.

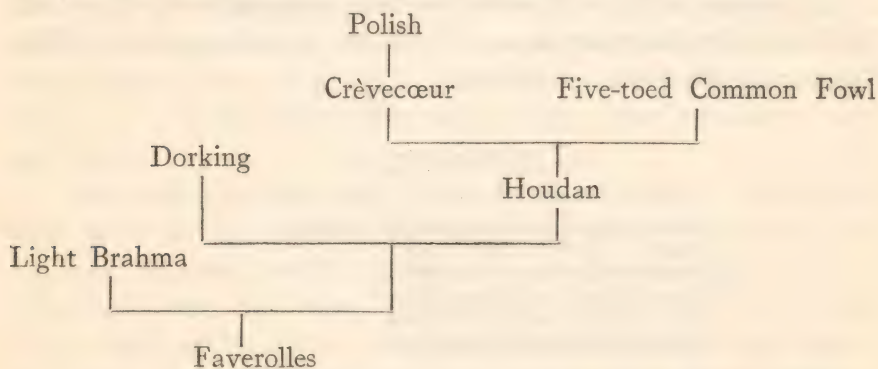
Colour of Flesh and Skin: White.

Colour of Legs and Feet: White.

Colour of Egg-shells: Dark cream.

**Origin.**—This breed is not recognised as distinct by some of the French writers on Poultry. That it is a composite breed is unquestionable, due to a number of crosses made upon the common fowl of the

Seine-et-Oise and Eure-et-Loir districts of France, where poultry breeding is a most important industry. M. Cornevin says (3) that it was formed by crosses between the Dorking and the Cochin, or the Houdan with the Cochin and Langshan. Neither of these crosses, however, would account for the Faverolles, which have characteristics not found in any of the breeds named. In an article by the late Mr. Alexander Comyns he stated (15), speaking of the fowls in the Houdan market that 'they are cross-breeds, showing a trace of Houdan, Dorking, Brahma and, sometimes, Cochin,' with indications of what he termed Cossacks, which we believe from other evidence to have been single-combed Crèves, and he adds that he 'saw a great many black, single-combed, bearded birds of good size.' In a work published about 1894 by MM. Rouillier-Arnoult, of the Poultry School at Gambais, it is stated (16) that 'to get a true explanation of the breed it is necessary to go back about forty years. Faverolles then possessed a common race of fowls, and Houdans. When the great feathered races of Cochins and Brahmas, and also Dorkings appeared, the infatuation for those fine-looking birds was excessive, and cocks were used of these breeds to cross with the common fowl, particularly with that of Houdan. From these crosses, made without method, came mongrel fowls, but with the size and strength of the males, whilst keeping that delicacy of flesh, which contributes to the success of any fowl in France.' Here we have, as far as can be traced, the origin of the Faverolles, shown in the sub-joined table of descent :



To the Dorking and Houdan influences may be attributed the white flesh and legs and the fifth toe ; to the Crève and Houdan the



whiskers and beard ; to the Brahma the feathering on the legs and the dark-shelled eggs. The late Mr. J. P. L. Marx pointed out (9) that when first imported into Britain the single comb and beards were difficult to breed, which explains the considerable amount of variation.

**History.**—The name is derived from a village called Faverolles, in the Department of Eure-et-Loir, about midway between the small towns of Houdan, Dreux and Noyent-le-Roi, in a district where poultry-raising is carried on extensively, supplying a large portion of the fowls sold on the Houdan market, one of the most important in France. The Faverolles fowl was evolved without any definite seeking on the part of breeders to establish a new type. They had in view the production of good table chickens and layers of winter eggs. It was stated by a visitor to the district in 1896 (17) that ‘out of ten farmers (in the Houdan country) nine keep Faverolles and one Houdans ; also 98 per cent of the fowls on the central markets of Paris sold under the name of Houdans are Faverolles, which weigh several pounds more than the former.’ About 1895 an Irish lady, who had attended the French Poultry School at Gambais, imported a number of specimens into the Green Isle, where they were found most valuable ; in the previous year the breed had been introduced into Britain, since which time they have won a fair amount of favour, due to their hardihood and prolificacy, though there has been a decline during recent years. This is the result of the uncertainty in colour and that they are not very attractive in appearance.

**Economic Qualities.**—The Faverolles is essentially a business fowl. A French writer has said that ‘as farmyard fowls they stand unrivalled, their superiority being uncontestable, having large size, early maturity, excessive hardiness, are splendid sitters and mothers. No fowls are better adapted for cold countries owing to their small combs not being liable to be frozen, and on account of their downy and warm feather clothing.’ The absence of a crest is an asset in a moist climate. The chickens are quick in growth, and are very fleshy. The Faverolles, whilst not equal to some of the other French races for winter fowls, are found most valuable for the Spring and Summer trade. As crosses they are excellent. In an experiment made at the College Poultry Farm, Theale, in 1904, the Faverolles—Buff Orpington cross made the most rapid growth out of sixty birds tested at the same



time. Five cockerels of this cross attained an average weight of 2.9375 pounds, and eight pullets an average weight of 2.3203 pounds, in twelve weeks. The hens are prolific layers, especially in winter, of medium-sized eggs, and are excellent as sitters and mothers.

**Description.**—In body the Faverolles is large, broad and deep; the breast is broad, prominent, and has a deep keel: the back is flat and square, and broad at the shoulders; wings rather small and carried well up; neck, short and thick, well covered with hackle; head, short and broad, with no crest, and a short, stout beak, horn in colour; comb single, moderate in size, evenly serrated, and fine in texture; wattles, small and fine; it has a thick, full beard and muffs, which are short and standing well out; earlobes white and small, hidden by the whiskers; tail full, with broad medium sickles; legs medium in length, wide set, and strongly built, but not heavy in bone; toes five, firmly placed; the outer sides of the legs, which are pinky-white, and the outer toe on each foot, are sparsely covered with soft feathers, but there should be no appearance of hock feathers on the thighs; the carriage is sprightly and active; the birds are very tame, and can be kept in confinement. Weight: males,  $6\frac{1}{2}$  to  $8\frac{1}{2}$  lbs.; females, 5 to 7 lbs.

**Varieties.**—At first birds of all colours were met with. Selection has eliminated some of these and the following are recognised, the Salmon generally preferred:

**Salmon.**—In the cock, breast, wing-bar, primary feathers, thighs, under fluff, and tail black; beard and muffs black, ticked with white; hackles and wing-bows, straw; back and shoulders a mixture of black, white and brown. Hens largely wheaten-brown.

**Light.**—Silvery-white, with striped hackles; wing feathers and tail edged with black.

**Black.**—Self coloured, somewhat dull in hue.

## MANTES.

Nomenclature: In all countries, Mantes.

Variety: One.

Classification: Table.

Colour of Flesh and Skin: White.

Colour of Legs and Feet: Pinky-grey, mottled with black.

Colour of Egg-shells: White.

**Origin.**—That this breed has some affinity with the Houdan appears to be evident in spite of the differences. The late M. Voiteulier,

who first introduced it to the public, stated (18) that it was not descended from the breed named, in which he is supported by M. La Perre de Roo, (2) who said that fowls of this type had been known for a long period in the Department of Seine-et-Marne around the little town of Mantes.

**History.**—The Mantes fowl was first brought before the notice of the public in 1878, since which time greater attention has been given to selection on defined lines. As a result it is generally found in the district where it originated. So far as we know it is not met with elsewhere, and is thus a further example of development of district types of fowls.

**Economic Qualities.**—M. La Perre de Roo thus speaks of the Mantes fowl (2) :

‘Hardier than the Houdan, alert, with a handsome appearance, beautiful plumage, of a good size, a good layer, excellent as a sitter and mother, the Mantes fowl has in the highest degree all the qualities necessary for a farm fowl. It thrives well in nearly all climates, and those who have tried it speak well of it. With light bone and a square form breeders who are known as producers of large quantities of flesh of the first quality are favourable to it. With a remarkable precocity and a surprising adaptation for fattening, at the age of three months a Mantes fowl, bred at the right season, can be brought in a few days, without much effort, to a perfect condition for killing. Its flesh is of a beautiful whiteness, fine, delicate, and as highly esteemed by *gourmets* as the best Houdans or Crève-cœurs.’

A fowl is met with in some parts of Normandy to which the name De Gournay has been given. It would appear to be an offshoot from the Mantes fowl, but smaller in size.

**Description.**—In size, shape, weight of body and colour of plumage, the Mantes closely follows the Houdan, except that it is rather longer in the neck and leg, and more upright in carriage. There is no crest upon the head; the comb is large and single, standing upright in the male and falling over in the female; it has large beard and whiskers, as in the Houdan; the legs and feet are pinky-grey, mottled with black; four toes on each foot.



## CAUSSADE (OR GASCOYNE).

Nomenclature : Caussade.

Variety : One.

Classification : Table.

Colour of Flesh and Skin : White.

Colour of Legs and Feet : Blue-grey.

Colour of Egg-shells : White.

**Origin.**—Upon this point we have no evidence. With the exception of body and short legs, these birds bear considerable resemblance to the type of fowl generally seen on the northern shores of the Mediterranean Sea.

**History.**—The breed is found in the Department of Gaud, of the Province of Languedoc, in the South of France, west of the Rhone Valley, where it is said to be bred to a limited extent.

**Economic Qualities.**—A good layer, almost a non-sitter as it is a poor sitter and mother ; flesh white and good in quality ; hardy and precocious.

**Description.**—Small in size of body, with very short legs and neck, the Caussade resembles other dumpy or courtes-pattes races ; plumage entirely black ; comb small and single, standing upright in both sexes, though it frequently hangs a little on one side in hens after they have passed the second year ; wattles somewhat long, and, with the comb and face, are bright red ; earlobes white and long ; legs and feet blue-grey.

## FRENCH CUCKOO.

Nomenclature : Coucou de France, Coucou de Bretagne, or Cuckoo de Rennes.

Varieties : Bretagne, Rennes.

Classification : General Purpose.

Colour of Flesh and Skin : White.

Colour of Legs and Feet : Pinky-white.

Colour of Egg-shells : White.

In the north-western provinces of France is found a fowl which goes under the various designations given above. The two varieties are often described separately. They are, however, of one breed. Perre de Roo says (2) : ‘ There exist two varieties, which are only different in that the comb is rose in both sexes of one, and single, upright and extremely well developed in both sexes of the other.’



**Origin.**—Although claimed to be one of the oldest French races of fowls we have been unable to obtain any information as to its actual origin. From the inherent conservatism of the Breton people, who are very little affected by external changes, adhering firmly to their ancient customs and animals, this would explain the persistency throughout the ages. Cuckoo plumage is by no means rare, and is found in many countries. One recommendation is that birds of that colour of plumage are very hardy, which would commend them to a practical people.

**History.**—Whilst Cuckoo fowls are met with in other parts of France, birds of this coloration are met with almost universally in Brittany, where they are regarded with great favour by the peasantry. The rose-combed variety, generally called ‘Cuckoo de Bretagne,’ or ‘Cuckoo de France,’ is chiefly found in the northern sections of the Province, whilst the single-combed variety is bred almost entirely in the southern districts around the city of Rennes.

**Economic Qualities.**—This fowl is very hardy, a good forager, and inclined to wander widely. The hens are excellent layers, producing fine large eggs; they are unreliable sitters and mothers, and do not become broody early. The chickens are fairly precocious, and can be reared without difficulty. They find a large amount of natural food, and are accustomed to plain diet. The chickens fatten well, the flesh and skin being very delicate and white, while the weight of bone is small. One special feature of the breed is that both males and females remain in service and profit longer than is usual, showing great vitality. The Bretons regard the breed as one of the most useful of all domestic fowls.

**Description.**—In body the fowl is of medium size, with a good frame, well developed in front, much slighter behind, and has very fleshy limbs; the neck is short and thick, well covered with hackle; the head and beak are short and thick, surmounted by a large comb; wattles of medium length, and bright red, as are the comb and face, which latter is bare; earlobes small, usually white splashed with red; tail in the male is well furnished with long sickles; the legs are short and strong, without giving the bird a dumpy appearance, and are pinky-white in colour; the legs and feet are clean, with four toes on each foot; the whole of the feathers in both sexes have a ground colour

of steel-grey, barred across with blue-black. Weight : males,  $5\frac{1}{2}$  to 7 lbs. ; females, 4 to  $5\frac{1}{2}$  lbs.

**Varieties.**—Coucou de Bretagne has a large rose comb, carried well in front over the beak, and with a spike behind. It is set firmly on, and covers the top of the head.

Coucou de Rennes has a large single comb, upright, carried well in front and behind, and evenly serrated with deep cuts.

### BOURBOURG.

Nomenclature : Bourbourg.

Variety : One.

Classification : General Purpose.

Colour of Flesh and Skin : Creamy-white.

Colour of Legs and Feet : Pinky-white.

Colour of Egg-shells : Salmon-tinted.

This race is acknowledged to be the result of a cross, in which the Light Brahma is evident as shown by the colour of plumage, shape of body, and leg feathering. All indications are that the breed named was crossed upon single-combed, small-bodied birds of the type common in the border districts of France and Belgium, in many respects similar to the Braekel and Campine.

**History.**—The Bourbourg fowl was, prior to the Great War, increasingly bred in the Pas de Calais, that is, the section of Northern France lying between the port of Calais and the Belgian border, in the neighbourhood of Bourbourg, Bergues, Sedres, Saint Omer and Hazebrouck, where it was very popular. Nearly all the fat fowls sold in the Lille and Dunkirk markets were of this breed, and the brown-shelled eggs known as Calais-browns were from it. Time has not yet elapsed to show whether it will be fully restored.

**Economic Qualities.**—This race proved to be most suitable for farmers, as it is very hardy, tame, and a good forager. The hens are good layers as a rule (in which respect, however, there is considerable variation) of salmon-tinted eggs, which are of good size. They sit early, are very faithful as mothers, only becoming broody about twice in the year. The chickens are precocious, quick in growth, producing a considerable amount of flesh, very responsive to the fattening process. They are not fatted so highly as in Normandy.



The Bourbourg meets a demand for second and third class poultry, giving good flesh development.

**Description.**—This is a medium-sized fowl, with longish body, standing on rather short legs, following the Asiatic type in that it is somewhat upright and flat in breast ; the back is broad and flat ; neck medium in length, stout, well arched, and abundantly covered with hackle ; head large and short, with a short, strong, well-curved beak, which in colour is pinky-white, with several lines of pale brown ; comb single, upright, well serrated, and rather large, following the line of the skull ; wattles medium in size and bright red, as are the comb and face ; eyes large and bright ; there is a small beard of fine feathers growing upwards ; tail moderate in size, carried closely, furnished with sickles of medium length ; thighs stout, well feathered but without hocks ; legs stout and strong, covered on the outer side with short feathers, and pinky-white in colour ; the toes are long, and four in number ; in colour of plumage the Bourbourg closely follows the Light Brahma, namely, the head, back, saddle, breast, chest, abdomen and thighs are silvery-white ; the hackles are white striped with black ; the primary and secondary feathers of the wings are black, with outer feathers white, and the tail is black, on the outer side touched with white. Weight : males  $6\frac{3}{4}$  to 9 lbs. ; females 6 to 7 lbs. The constant tendency in these birds is to follow the Asiatic type, more especially in shape of body, in comb, and in colour of legs.

### ESTAIRES.

Nomenclature : *French*, D'Estaires.

Variety : One.

Classification : Table.

Colour of Flesh and Skin : White.

Colour of Legs and Feet : Blue.

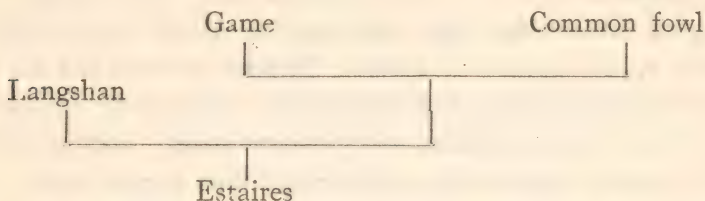
Colour of Egg-Shells : Brown.

**Origin.**—It would appear that this breed had the same foundation as the Bourbourg, but that in addition the Game and the Langshan were introduced. The prepotency of the last named is evident. In body, shape, and colour of plumage it is closely followed. Among poultry-keepers in the Estaires district prior to the Great War, with a view to the improvement of the flesh qualities, the Game fowl was



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introduced and crossed with the common fowl of the district, and afterwards the Langshan. The descent is as follows :



**History.**—The breed was bred in a somewhat limited area, chiefly around Merville, La Gorgue, Estaires and Laventie, all of which were in the war area. There were produced the finest table chickens sold on the Lille and other markets of the Department of the Nord. These birds were sold at Lille under the names of ‘poulardes de Bresse,’ or ‘Chapons du Mans,’ and in appearance resembled those races when dead, especially the last named. How far the war will alter the fowls of the district has yet to be decided.

**Economic Qualities.**—Estaires fowls are tame and not disposed to wander far, yet are found to be very hardy for ordinary farm conditions. The hens are excellent layers of deep brown-shelled eggs, of fine quality though small owing to the Langshan influence, they make good sitters and mothers. The chickens are fairly precocious, easily controlled, and produce a fine quality of flesh, which is very savoury ; they fatten remarkably well. The pullets come into profit at an early age.

**Description.**—The body is large and long, with a prominent breast, short tail, and has the appearance of a thick-set, fleshy fowl ; the neck is of medium length, with close hackle ; head moderate in size, rather long, as is the beak ; comb single, large, well serrated, and falling over in the hen, but upright in the cock, with wattles in unison, both are fine in texture ; the eye is not very prominent ; earlobes small and red ; legs medium in length, stout, yet not heavy in bone, and slightly feathered down the outer side, as are the outer toes ; in colour the legs and feet are dark blue ; the plumage is bright black, with metallic reflections, like its progenitor the Langshan of the older or Croad type, as modern Langshans are regarded as useless in France. Weight : males, 7 to 8 lbs. ; females, 6 to 7 lbs.

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- (16) L'Eclosion et l'Elevage Artificiels, par Rouillier-Arnoult, (Paris, undated).
- (17) *The Feathered World* (London, 1896).
- (18) Incubation Artificielle, par Voitellier (Paris, 1894).





CHAPTER V  
SPANISH RACES OF FOWLS.



## CHAPTER V

### SPANISH RACES OF FOWLS.

CASTILIAN.

BLACK SPANISH.

MINORCA.

ANDALUSIAN.

BARBEZIEUX.

PRAT.

PARASIO.

Until recent days, when the advent of steam extended knowledge of other countries, even the more remote, it was customary in Britain to term traders who operated in the Mediterranean 'Spanish' merchants, as distinct from those importing from the Near East who were called 'Turkey' merchants. Hence the fact of certain races of fowls being called by Spanish names was no proof of the place of origin. In this instance, however, the designation is largely correct, for the races which are usually called Spanish undoubtedly originated in the Peninsula so far as the modern type is concerned. Two important factors should be kept in mind, namely, that Spain was at one period the dominant Power in the world, that she was mistress of the seas, that great portions of the globe owed her allegiance, and her influence was at that time greater than that of any other nation. As a consequence, intercommunication between Spain and other countries was general, increased by her geographical position. And, also, that her ports were points of call for trading vessels, so that she both received and sold the stock and products of other countries.

Personal observations in Spain during several visits indicate that the country is not favourable to the higher types of domesticated animals and birds, except around the sea coast and in some of the valleys, where the conditions are more conducive to flesh development than on



the central tableland and among the Sierras. The fowls found in the country are generally of the light-bodied, egg-producing type. Up to a few years ago we did not see any fowl, alive or dead, worthy of the name for flesh qualities. The better birds served in hotels were almost entirely imported from France. Recently more attention has been given to meat properties in a few sections of the country, and especially in Catalonia and the north-western sections.

We have further evidence of the remarkable uniformity of type of fowls along the northern shores of the Mediterranean Sea. Our observations have extended from Spain to the Balkan States. The Spanish fowls, the Bresse and other races in France, the Leghorn in Italy, the common fowls of Austria, and the Magyar in Hungary, have distinct resemblances, varying in secondary characters as well as coloration of plumage, but very uniform in others and in qualities. Nor is this surprising, as intercommunication between one country and another was easy and frequent. Even the great natural barrier of the Pyrenean Mountains did not hinder the spread of animals, for these were and are lower areas east and west and the sea was always at hand. For a couple of thousand years the relationships between Italy and Spain, commercially and politically, have been very close indeed, which fact explains why the Spanish and Italian fowls are more nearly allied than is the case of either with the French.

### CASTILIAN.\*

Nomenclature: *Spanish*, Castillian; *German*, Castellana.

Varieties: Black for choice.

Classification: Egg-production, largely non-sitting.

Colour of Flesh and Skin: Grey.

Colour of Legs and Feet: Black.

Colour of Egg-shells: White.

When first seen the affinities between the Castilian and the Minorca are at once apparent, such differences as exist are chiefly in the greater size, depth and rotundity of body of the latter, following upon breeding in Britain to other ideals than in Spain, where the climatic conditions make for slighter bodies. When first seen in 1902 the Castilian was rough and small. Since that time much has been done in the way of selection to improve the breed, and there has been some infusion of





CASTILIAN FOWLS  
(From "*Avicultura*")



PRAT FOWLS  
(From "*Avicultura*")



Minorca blood, which has undoubtedly had a beneficial influence without militating against the qualities of the former.

**Origin.**—There is no direct evidence as to the origin of this breed, nor how long it has been known in the country. In Spain a common belief is that it was first introduced when the Moors held a large portion of the country, and it is often termed the ‘ Moorish ’ fowl. It is very general in Old Castile, which comprises a great part of the table-land to the North of Madrid, as well as Andalusia. Don Salvador Castello, Director of the Royal Poultry School at Arenys de Mar, near Barcelona, says (1) that it was formerly known in the province of Ciudad Real and Zamora. In the latter it is frequently known under the name of ‘ Zamorana.’ As already noted, however, birds more or less of the same type are very widely distributed, and can be accepted as the common fowl of the country, though often bred without strict adherence to external characters. Whilst the majority of birds seen in the districts named are black in plumage, there is considerable variation in coloration and markings, as is usual in the absence of selective methods of breeding.

**History.**—So far as we are aware there is not much to be said in this respect. That birds of this race have been bred for centuries in Spain is evident, without any special attempt, until recently, to fix the characters other than those which are natural. It is desirable to remember that in very hot countries dark, even black plumage is general, and dark fur in animals. In this way Mother Nature pigments her creatures against excessive sunlight. Black is a slow conductor of heat. Below is shown how far the Castilian fowl has influenced other races of fowls.

**Economic Qualities.**—The Castilian fowl is essentially an egg producer. Whilst in its native land the claim is made that it is the most prolific of all races, no definite figures are available as to the average number produced per annum. That it is a good layer is unquestionable, borne out by birds of this breed which have been tested in Britain, where they have made excellent records, in some instances exceeding highly bred pedigree stock. Mr. Lewis Wright suggests (2) that the development of egg qualities is due to ‘ the prevalence of the Roman Catholic religion, which permits the use of eggs when flesh is forbidden.’ That statement is hardly borne out by the

fact that in France, Belgium, Southern Germany and Austria, where Roman Catholicism is pre-eminent, the production of table poultry is more important than that of eggs. Castilian eggs are not of first rate quality in Spain, which is explainable by the dry, arid conditions in the centre of that country. The Castilian fowl is mediocre in meat qualities, as the flesh is scanty, dry and poor in quality. The hens rarely sit, and are unreliable as mothers. As shown with regard to the Leghorn, in Italy, only a moderate percentage of the hens evince the maternal instinct. The birds are hardy, yet have the slowness of feathering which appears to characterise most of the Spanish races, and which is not suggestive of great vigour. For practical purposes this is a breed deserving of attention by egg producers in other countries.

**Description.**—The fowls, especially males, are tall, slight in frame, flattish in front, well developed behind, with rather long legs, and are very active. They are, like their owners, proud in carriage; the single comb is upright in the male, falling over to one side in the female, and small-medium in size; the face is red; earlobes are white, sometimes tipped with red, but so far as we have seen in Spain, white-faced specimens are unknown; the cocks have large, well-shaped sickles; the legs are well set, and the feet have four toes. Weight: males, 6 to 7 lbs., females, 5 to 6 lbs.

**Varieties.**—Blacks are preferred, and are predominant. Blues, Whites, and darker hues are met with.

### BLACK SPANISH.

Nomenclature: *English*, Spanish; *French*, Espagnole; *German*, Spanier; *Dutch*, Spaantch Witwang; *Danish*, Sorte Hvidkinvede Spaniere; *Spanish*, Cara Blanca negra; *Italian*, Spagnole; *Hungarian*, Fekete Spanyol.

Variety: One.

Classification: Exhibition, Non-sitting, Egg-production.

Colour of Flesh and Skin: Grey.

Colour of Legs and Feet: Dark slate.

Colour of Egg-shells: White.

As a consequence of the name given to this fowl the assumption formerly was that it was representative of Spanish poultry. The result of our inquiries and observations indicate that it is unknown in Spain, except in the hands of a few breeders who have imported specimens. That it is of the same family as the Castilian and Minorca



racess cannot be questioned. The evolution, however, has been considerable since leaving its native land, and its leading feature—the white face—was developed at a later period.

**Origin.**—Various suggestions have been advanced as to the origin of this breed. Mr. Harrison Weir says (3) that it ‘ might possibly be the breed alluded to by Columella as having large white ears, and more given to laying than sitting and bringing up their young ; ’ but that ancient writer, so far as we have traced, did not refer to white on face, and his remarks would equally apply to the Leghorn or Italian fowl, to the Castilian, and to the Bresse. Possibly the fowl referred to by Columella was the progenitor of all these breeds, which could be conveyed along the Mediterranean shores into France, and across the Gulf of Lyons into Spain, there to lay the foundation of breeds as known to-day.

Many earlier writers on poultry applied the term Spanish to fowls which apparently had no affinity with this race. Dickson (4) confounds it with a crested race related to the Polish, and speaks of ‘ a black tuft which covers the ears, ’ saying that it had broad round black spots on the breast, the rest of the body being velvety black. And Dixon, a dozen years later, refers to birds imported from Spain in 1846 which were (5) ‘ in shape and carriage very much like the Spangled Polish (except being much longer in the leg), having topknots and a tuft of feathers hanging under the throats ’ ; but, as stated by him, the recognised Spanish of his day were entirely black, with white faces. Moubray, however, earlier in last century (6), speaks of them as ‘ all black, black legs, large red comb and gills, ’ but does not mention the white face. In an old, crude painting of more than 100 years ago that feature is shown, even if small. Don Salvador Castello says (1) :

‘ This (the white-faced Spanish) is an exceedingly rare breed, upon whose origin it is difficult to give an opinion. It appears in all foreign works as a Spanish breed, and naturalists in old days appeared to have been under the same impression when they Baptised it *Gallus hispaniensis*. . . . Some say that before the discovery of America this breed existed in Spain, and the fact that it is found in Cuba and certain republics of South America has given reason to suppose that the Spaniards exported them there. Everything is possible, but it is very curious that there is no trace of the breed in drawings or in



histories.' He adds that there is no doubt it must have originated from some Castilian fowls which had white earlobes and the defect of a white face. With this information we must remain content. It may, however, be accepted that the birds originated in birds which in the first instances were obtained from Spain.

**History.**—Both in Britain and the Netherlands White-faced Spanish have been known for centuries. Nor is this at all remarkable. Trade between the Peninsula and the United Kingdom has existed for two thousand years. Spanish ports were often the last points touched by ships en route. For centuries Spanish wines were freely imported into Great Britain and Ireland. Further, for a long period of time the Netherlands were subject to the Spanish Crown, and, as a consequence, intercommunication was frequent, whilst the large number of Spaniards who lived in the Low Countries would naturally be the means of introducing whatever was rare or of special value in the two lands.

Mr. Lewis Wright, who remembered the older Black Spanish, of which he was a breeder at one period, said (2) that they were bred in Britain 'to a somewhat rough or cauliflower type of face,' but that 'a second introduction of birds with smaller and smoother faces came from Holland, precisely that district of Europe which had been most overrun by the Spanish armies under the Duke of Alva.' The revised edition of Moubray, published in 1854, and Wingfield and Johnson's 'Poultry Book,' issued in 1853, both speak of the races as imported from Holland. And Mr. Harrison Weir confirms this view thus: (3) 'Its home for a lengthened period, as a fancy fowl, has been in the Low Countries and Netherlands, though some say Holland only (sic). Yet certain is it that, within the last half century at least, the best birds were imported from one or the other; but the breed was for many years well known and valued in England, especially among the silk weavers of Spitalfields, who, be it noted, were descendants of refugees from France and the Netherlands.

Since the middle of the Nineteenth Century the history of the Black Spanish has been one of steady decadence. At the beginning of the time named the classes were the largest in all the great exhibitions. At one Birmingham Show upwards of 300 specimens were on display. No race, however, has suffered more from breeding for fancy

points. Everything has been sacrificed to the size and texture of the white face. To secure smoothness of face trimming became common by removal of hairs, and to obtain pure whiteness of face the birds were coddled to an extreme, and protected from sun and rain as if they were the most tender hothouse plants. Never a hardy fowl, delicacy of constitution became general. Although the Black Spanish hen remains a prolific layer of large-sized eggs, the chicks are difficult to rear, are slow in feathering, unable to withstand exposure, and thus of small value to the practitioner. Seldom now seen, even in exhibitions, this breed is a monumental example of the folly of excessive development of arbitrary points. The lesson is a severe one. No breed in which the economic properties are sacrificed for abnormalities can hope to gain or maintain popularity, as proved in this instance.

**Economic Qualities.**—Spanish are poor in flesh properties, as the flesh is scanty and dry. The hens are excellent layers of large eggs, which, however, are produced almost entirely in the Spring and Summer months. They cannot be depended upon for winter egg-production. Chickens should not be hatched early, say, about May, as they are slow in feathering, and are unable to withstand cold, more especially east winds. The old birds are slow moulters, and often may be seen almost entirely denuded of feathers. At all ages they are delicate and soft; even when the race is bred and reared on more sensible lines they cannot be regarded as hardy. If breeding for the white face was abandoned and a more natural system of keeping was adopted it is possible that a greater amount of constitutional vigour could be induced. In face of other breeds available there does not seem any justification for adoption of such methods with what is a decadent race.

**Description.**—The Spanish is a small-bodied fowl, of medium length, and full behind; the neck is long and fine, surmounted by a large head, upon which is a deeply serrated, tall comb, fitting close to the head at the back, which comb falls over in the hen; wattles are correspondingly long; as already mentioned the leading feature for exhibition purposes is the white face, which not only surrounds the eyes, extending well behind, and joining with the earlobe, hangs down lower even than the wattles. The skin is like the finest kid in texture, perfectly free from folds, and is trimmed of the fine hairs which grow on it. The smaller-faced birds, in our judgment, are the hardier and



are more attractive in appearance ; the legs are long, giving a ' reachy ' carriage ; the plumage is scanty, fitting close to the body ; the wings are short and carried close up ; the tail is of medium fulness with large sickles in the male ; plumage a dull black throughout ; the beak is dark horn, and the legs and feet dark slate. Weight : males, 6 to 7 lbs.; females, 5 to 6 lbs.

**Varieties.**—Blacks alone are now recognised. In the 1854 edition of Moubray it is stated that (7) ' the first White Spanish were imported in 1846,' respecting which no proof is given. We have found references about the middle of last century that many pure White Spanish were at one time bred in the Exeter district.

### MINORCA.\*

Nomenclature : *English, Italian, Dutch, Hungarian, Minorca ; French,*

*Spanish, Minorque ; German, Minorka ; Danish, Minorkaer.*

Varieties : Black, White.

Classification : Exhibition, Non-sitting.

Colour of Flesh and Skin : Blacks, Grey ; Whites, white.

Colour of Legs and Feet : Blacks, very dark slate ; Whites, white.

Colour of Egg-shells : White.

**Origin.**—It is generally accepted that the Minorca as known in Europe and America is descended from the Castilian fowl. The name is due to the first importations into Britain having come from Minorca, which is one of the Balearic Islands off the east coast of Spain. As those islands are included in the Spanish kingdom, we expect that the same class of fowls would be found there as on the mainland. Don Salvador Castello makes a very interesting suggestion as to the name (1) ' The two breeds (Castilian and Minorca) are in my opinion identical, and whether or not the English were the first to bring them into notice on the other side the Pyrenees, we may suppose that the first birds were taken from Andalusia, and thence to Gibraltar, and that then, through a misunderstanding, the English imagined that they had been put on board at Mahon (capital of the island of Minorca), where possibly the vessel may have touched, and gave them the name erroneously. At any rate it is a fact that the breed was exported, and that the English, past masters of the art of improving a breed without destroying any of its characteristics, have succeeded in transforming it in such a manner, that, although the characteristics of the two breeds are identi-

\* Plate XXIII.







*Photo, A. Rice*  
 MINORCA COCKEREL  
 (Bred by Mr. Fred. W. Seed, Hardhorn Road, Poulton,  
 Nr. Blackpool)  
 2nd Olympia Show ; 3rd Prize Crystal Palace



*Photo, J. Asquith*  
 MINORCA PULLET  
 (Bred by Mr. Fred. W. Seed, Hardhorn Road, Poulton,  
 Nr. Blackpool)  
 1st and Challenge Cup and Special for Best Minorca in Show at  
 British Minorca Club Show, held Great National, Leicester.

cal, yet they are instantly distinguishable.' The theory here put forth might be accepted from its probability, were it not that evidence is forthcoming which controverts it. The late Mr. Lewis Wright, who knew the race for more than fifty years, said (2) 'The late Mr. Leworthy, of Barnstaple (Devon), who had bred it since about 1830, told us that several lots had come from Minorca, and that a friend and townsman of his, a Mr. Willis, had been familiar with similar birds in the island itself.' And, also, that 'Sir Thomas Dyke Acland brought birds from Minorca direct in 1834 or 1835 from which a strain had been bred at Holnicote for many years, and distributed throughout the neighbourhood.' The Acland family believed that the introduction of this breed into the West of England was mainly due to this importation. The late Mr. John Harwood, of Tiverton, for many years a breeder of Minorcas and secretary of the Minorca Club, suggested a much earlier introduction, and stated (8) that he had been able to trace the breed in the Tiverton district as far back as 1780, when many Spanish and French prisoners of war were interned there, several of whom, after peace was declared, became naturalised as Englishmen, and he believed they were responsible for its introduction. An old breeder in 1876 showed him a picture of a trio of Minorcas painted in 1810, showing a very pure type of hen. The cock, however, was badly formed, too high in tail, and had an ill-shaped comb. From what has been stated it is reasonable to assume that, whilst the Minorca originated in Spain, and possibly some of the importations were from that country, perhaps brought by our armies after the Peninsular War, importations had also been received from the island of Minorca. Hence the designation given to them.

These observations apply to the Black variety, which was the true type. The Whites doubtless were a sport, by no means uncommon in breeding black plumaged fowls. One writer (8) has stated that in 1851 he produced a pure white bird from Blacks with which Blue Minorcas (Andalusians) were running.

**History.**—For a considerable period Minorcas were known generally under the name of Spanish fowls, and afterwards as Red-faced Spanish, after the white-faced became more common. In the earlier editions of Moubay (7) the description of Spanish would stand for the Minorca, though the illustration distinctly represents a



Black Spanish. By the middle of last century these distinctions had been fixed and become recognised. In Dixon's work (5) that is apparent. He states in the chapter on Spanish fowls, 'In North Devon they called the Spanish fowls 'Minorcas'; others call them 'Portugal fowl'; and his description is evidently that of the true Minorca, although white-faced specimens are mentioned. 'The combs of both cock and hen are exceedingly large, of a vivid and most brilliant scarlet; that of the hen drops over on one side. Their most singular feature is a large white patch, or earlobe, on the cheek, which in some specimens extends over a great part of the face.' Thus the two breeds are confused. In 1853 classes were given at the Bristol Agricultural Show both for Spanish and Minorca fowl, which is the first instance we have found of prizes offered for the two breeds distinctly.

The Editor of the *Cottage Gardener*, replying to a correspondent in the same year, said that (9) 'the Minorca fowl of the western districts of England is a bird somewhat lower on the leg and of a rounder form than the Spanish; and the white cheek, the peculiar characteristic of the latter, is absent, the earlobe alone being of that colour.' The 1854 edition of Moubray refers to the Minorca as a sub-variety of the Spanish, which latter was at that time in the hey-day of its popularity, when red-faced specimens would be regarded as untrue or inferior to the white-faced. From that period the two breeds were looked upon as distinct.

For more than half a century the Minorca was only to be met with in the south-western counties of England, chiefly in Cornwall, Devon and West Somerset, whence it gradually extended, until by 1870 it was almost universal west of the Quantock Hills, the Cornish Game dividing the pre-eminence where table poultry were specially bred. Around Barnstaple, Tiverton, Crediton, Exeter and Tavistock, it was kept largely and carefully. In 1875 and 1876 letters in the *Live Stock Journal* brought the race prominently forward, and the efforts of a few determined and enterprising breeders, together with its productivity and as a layer of large-sized eggs, won it great popularity first in Britain and later in other countries.

The first classes for Minorcas at the Crystal Palace (London) Show were provided in 1883. From that time onwards it rapidly advanced in favour as an exhibition fowl and displays were numerous at shows

large and small. Among smaller breeders in the industrial areas its black plumage was a great asset. This popularity made for its undoing. Breeders by outcrossing exaggerated some of its characters, and for development of these, notably in size of comb and earlobe, as well as by increased size of body, led to its displacement by other breeds, such as the Leghorn and the Wyandotte, where practical values were the main consideration. The result of abnormal breeding was not so much seen in reduction of number and size of eggs, as in loss of constitutional vigour. Without that all characters and qualities go for naught. As to this aspect more is submitted below.

**Economic Qualities.**—Taking weight as well as number of eggs the Minorca occupies the first place as a producer. Whilst there are several rivals, so far as number of eggs is concerned, there are only two or three breeds which yield as large eggs. Often these reach an average of  $28\frac{1}{2}$  oz. per dozen from adult hens. Large size of egg is an inherent quality of all the Spanish races, even though our observations in Spain did not indicate the same average as we have experienced. How the increased weight of eggs has been secured is unknown. We may fairly assume that it was the result of selection following upon change of conditions. The rich pasture lands of the south-western counties of England and of the Netherlands would doubtless explain such increase both in the Minorca and the Spanish, if accompanied by breeding for this quality. For home consumption a large egg would naturally be preferred. The fact, however, is that for marketing purposes eggs from this breed are rather too large, and those weighing a couple of ounces less per dozen are preferred. The fault, if such it be, is on the right side, for in some of the more prolific breeds the eggs are too small, which tendency is being accentuated. An important point is that very large eggs are not of greater nutritive value relative to the increase in size and weight. In nearly all eggs from hens of medium size of body the yolks are very much the same, and that where the total size is larger this is due to a higher proportion of the albuminous, or white, portion, which is generally less dense. The quality of an egg is largely determined by the food supplied and the nature of the soil on which the birds are kept. Allowing for what is here stated, the Minorca is one of our most valuable breeds for egg production, especially as size of egg is a marketable feature. Upon the table it is fair, superior



to the Italian races. The flesh is grey in colour, not very abundant, and these birds are not amenable to fattening.

Breeding for development abnormally of characters has led to loss of the position which the Minorca at one time held. This was adopted in spite of warnings as to what the result would be. Many years ago the late Mr. W. J. Nichols wrote (10): 'It has been laid down by most breeders that the lobes should be almond-shaped, rather large, smooth in surface, and a pure white. To get this clearness of lobe it is necessary that the birds should be protected from cold winds and sun—in fact they have to be shut up and kept in an artificial state. Directly this is done the combs commence to spring, and if long confined they grow to an enormous size, eventually becoming so large and unwieldy that the base is unable to support the abnormally large growth, and then over it goes.' Since the year named exhibition breeders have, until lately, when saner methods are being adopted, continued on the same lines, not only making coarse the head, comb and lobes, but increasing the size of body.

Accompanied by coarseness of comb there has been a loss of constitutional vigour. It is generally admitted that the Minorca is by no means a hardy fowl, as is also the case with the Spanish and Andalusian. Upon this point Don Salvador Castello says (1): 'My experience has taught me that although improved in other respects the Minorcas have lost somewhat in hardiness, for they turn out to be of far less practical value than our Castilians. By running Minorca cocks with Castilian hens I succeeded in obtaining some valuable birds, which avoid the exaggerations in the shape of the English Minorcas, and at the same time are an improvement on our Castilian breed. Thanks to the importation of this new strain, I have improved it without diminishing its hardiness, in this way perfecting the external characters without injuring in the very least the purity of the breed.' It is by no means improbable that the better-typed Castilians have been influenced by Minorca blood.

From what has been stated it is evident that the Minorca, as compared with other breeds, more especially those of the Italian type, are less suited to cold exposed situations, and are slower in feathering, generally a sign of weakness. As a result the breed is better fitted to the kindlier conditions such as are met with in the south-western counties



of England and on the west coast inclusive of Scotland. Efforts are being put forth to correct the mistakes of the past, in which respect there should be a reduction of size of body, of comb and earlobe, to which end the Castilian fowl would be valuable for effecting this purpose. An interesting point is that the Minorca has well maintained its prolificacy and the size of egg.

For crossing purposes the Black Minorca is very valuable indeed. It should not, however, be mated with slow feathering races.

**Description.**—The Minorca is a full-bodied fowl, with a well-rounded breast, giving a square, compact appearance; the shoulders and back are broad, with a long back, sloping well to the tail; wings are medium in size, carried close to the body; the neck is long, well arched, thickly clad with long hackles; the head is long and broad, surmounted by a single comb, which whilst of a good size should not be coarse and ‘beefy’, as that is one of the most serious faults in exhibition stock. In fully grown cocks 4 inches high by 5 inches from back to front is large enough, and in hens  $3\frac{1}{2}$  inches deep by  $4\frac{1}{2}$  inches long is as large as any hen can profitably support. The combs should be well serrated; wattles are long in proportion to the comb; the beak is stout and long; eye full, dark and bright; the face is red without any sign of white, which would be a sign of blemish; earlobes medium in size, and almond-shaped, white in colour; the tail is full with long, broadish sickles, carried well back; legs are medium in length, giving the appearance of a somewhat low fowl, although young cockerels often appear stilty; the feet are well set, and the toes four in number. The Minorca is a graceful, well-proportioned fowl, unless the comb is too heavy, and the hens are well developed behind, as indicating a prolific layer. Weight: males 6 to 7 lbs.; females, 5 to 6 lbs. Senor Salvador Castello says (1), in comparing the Castilian with the Minorca, ‘English breeders have taken special pains to obtain birds with large combs, in some cases immensely spread out; they have made the shape more slender, and increased the brilliancy of the plumage; they have obtained greater bulk and weight, and have, in fact, created a type quite distinct from the Castilian of this country (Spain).’

**Varieties.**—The two colours are the Blacks and the Whites, for, strange to say, a Mottled Minorca has not been produced, which is an indication of the prepotency of the black pigment in the plumage.

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**Black.**—The plumage is of a rich, glossy black, without the metallic sheen met with in some breeds ; the beak is dark horn in colour, and the eye dark ; legs and feet are very dark slate ; other points as described above.

**White.**—Very few of these are now seen, probably due to the fact that they were less hardy than the Blacks. Many had the appearance of albinism.

### ANDALUSIAN.\*

Nomenclature : *English*, Andalusian ; *French*, Andalouse ; *German*, *Dutch*, Andalusier ; *Danish*, Andalüsiere ; *Italian*, Andalusia bleu ; *Spanish*, Andaluza ; *Hungarian*, Andalusiai.

Variety : One.

Classification : Exhibition, Non-sitting.

Colour of Flesh and Skin : Greyish-white.

Colour of Legs and Feet : Dark slate.

Colour of Egg-shells : White.

During several visits to Spain we saw throughout Castile and the northern provinces birds which differed considerably from the Castilian in colour of plumage. These included speckled and blues, the latter in many respects similar to what is termed the Andalusian. Such variations, however, are common in every land where black plumaged fowls are general. Mr. Harrison Weir paid a visit to Southern Spain in 1879 (3), 'and when there made every inquiry respecting the blue variety round about Cadiz, Gibraltar, Algesiras, Malaga, etc. ; but, although I visited several places where choice fowls were kept, the so-called Andalusian appeared to be quite unknown.' Upon this point Don Salvador Castello says (1) : 'It is quite possible that this breed came originally from Spain, for it is found throughout our country. It does not appear to have had any special connection with Andalusia, which name was probably given if imports into Britain were first from the port of Cadiz.

**Origin.**—This question does not present many difficulties. Given black fowls, from which whites would be obtained as sports or mutants, the crossing of these two colours would in some instances produce slate-coloured plumage. It is well known that fowls with this peculiar cast of plumage colour were found in Devon and Cornwall before any Andalusians were imported, and bred from Minorcas. In 1886 a writer, signing himself 'Devonian,' said (8), 'In the summer of 1849 I fell in love with one of a brood of Black Minorca chickens—the one I

\* Plate XXIV.







*Photos, A. Rice*

BLUE ANDALUSIAN COCK AND HEN

(Bred by Mr. C. Hargreaves, Cow Hey Farm, Great Harwood, Lancs.)





PARADISE FOWLS  
(Originated and bred by Professor Salvador Castello, Royal Poultry School, Arenys-y-Mar, Spain)



fancied the owner called a "Blue Minorca." It was agreed that I should have this one when old enough to be taken away, and then my poultry-keeping began with a Blue Minorca pullet (afterwards I found she was entitled to be called Andalusian).'

In the *Cottage Gardener* of 1859 (9) a correspondent stated that he had made 'a cross between a White Andalusian (? White Spanish) cock and a Black Spanish; the progeny is all blue—the colour of a blue pigeon; and another writer in the same journal (1860) said: 'The Black Minorca will often sport a white chick, and a blue one also, however carefully bred.' Ferguson says (11) that 'in Holland, previous to the naturalisation of the Spanish fowl, a domesticated bird, in colour a dun or bluish slate, though much inferior to the Spanish prevailed.' This writer made a very novel suggestion with regard to the origin of the Andalusian, stating that it was introduced into Spain from the West Indies, and that 'the Manx is the original domesticated species of Spain. We have seen but one specimen of the class, and believe it to be extinct. They are a bluish-grey cast of colour, and do not present a white face, but possess white earlobes, which are rather full compared to other varieties of domestic fowl, although less than in the Black Spanish. They have large combs and wattles; are somewhat short about the leg, both in shank and thigh-joint.'

We have not been able to trace any other reference to this so-called Manx fowl. If the statement were correct that it was the common fowl of Spain centuries ago (as the supposed importation from the West Indies is clearly untrustworthy), and that upon it was engrafted the Moorish or Castilian fowl, either brought from Africa or countries of Europe farther east, some light would be given as to variations of Spanish fowls. There are many references showing that grey, grey-speckled, blue and slaty-plumaged birds have been known in various countries inclusive of Britain. Under such conditions the production of the present-day Andalusian can be explained, for, as stated by Mr. R. T. Thornton, in 1889 (10): 'Take away the white face, and the Spanish would become to all intents and purposes a good Minorca; go a step further, and eliminate the black from the feathers except round the edges, put blue in the place of black, and you would produce a good imitation of the Andalusian,'—nay, the Andalusian itself. It is of

interest to note that at one time an attempt was made to call the Minorca by the term Andalusian. The former, however, retained its rightful cognomen. Mr. Lewis Wright said (2) that the earlier imported Andalusians had a small comb, which in the hens stood erect, and that these were crossed with Spanish, resulting in enlargement of the comb. Later the Minorca appears to have been used, thus counteracting the tendency to white in face which was so much seen in the later decades of last century.

**History.**—The first recorded importation into Britain took place in 1851, when a number of these birds were bought from a ship's captain at Portsmouth. White fowls of a similiar type had been known some years previously. Doyle says (12): 'Mr. John Taylor, who has obtained many prizes for his Andalusians, found great difficulty in procuring pure specimens of them in Spain, where they are extremely scarce. Out of twelve of the best that could be obtained for him, there were but three possessing the true colours and indications of pure blood. By uniting these with his original stock a vigorous and improved progeny was raised.' At first these birds were called Blue Spanish or Blue Minorca, but the term Andalusian was speedily adopted and retained. Since the period named a great change has taken place in the type. It would appear that the earlier specimens imported were very gamey in appearance, so much so that it was frequently assumed they were a Blue Game fowl. The modern Andalusian in respect to length of neck and legs follows the Black Spanish. The Minorca influence, however, is seen in the compact shape of body, as well as in the comb, though more recently the heavy Minorca comb has been evident, whilst finer in texture. A further change is that the birds first imported were not laced either in cocks or hens, or to a very slight extent. That is now regarded as a *sine qua non* in a pure specimen. In spite of their fecundity the Andalusian has not attained popularity in any country, and they are kept almost entirely for exhibition purposes.

**Economic Qualities.**—The Andalusian, like the Black Spanish and Minorca, is remarkable as a layer, both as to size and number of eggs. The claim has been made that it excels both of the breeds named. The following quotation thus speaks of them (13): 'We have kept them entirely for egg production, and have found them such wonderful layers, of both size and quality, that we discarded the common



farm yard fowls kept before. We took six pullets, hatched in April, and mated them with a cockerel on August 1st, and kept them until July 31st following, and the result of this experiment was an average of  $234\frac{1}{2}$ , or a total of 1,407 eggs. They were kept under favourable conditions—almost unlimited grass runs, with plenty of shade and shelter.' The eggs are large, frequently reaching 30 ounces per dozen. These birds are good foragers, yet bearing confinement well—in fact, the majority are so kept—but they are somewhat prone to feather-eating and comb-pecking. They are most suited to a kindly soil and sheltered position. Like other Spanish fowls they are scanty and slow in feathering, and feel adversely cold winds. They make moderate table fowls, except as *petits poussins*, or 'milk chickens,' for which they are suitable, as they grow quickly.

**Description.**—Blue, or slate, cannot be regarded as a natural colour in fowls and, as a consequence, the Andalusian is a very uncertain breeder, which has been emphasised by efforts to secure even lacing. The body is of medium length, and tapers sharply to the tail; the wings are long, and carried close to the body; the neck and legs are long, giving the appearance of a 'reachy' fowl; the comb is of good size, upright in the male and falling over in the female, evenly serrated and fine in texture; wattles long and broad; face bright red, free from white; earlobe moderate in size, carried close to the face, and pure white; the head, hackle, back and saddle in the cock are bright, clear black, as are the shoulders, wing-bow and tail; the breast and thighs have a ground colour of silver-blue, with black edging or lacing; the hen's body is evenly laced all over, except that the head is black, and the neck-hackle has black tips; beak in both sexes is dark slate, and the legs leaden blue. Many birds are much lighter, and others almost black. Weight: males, 6 to 7 lbs.; females  $4\frac{1}{2}$  to  $5\frac{1}{2}$  lbs.

#### BARBEZIEUX.

Nomenclature: In all countries, Barbezieux.

Variety: One.

Classification: General Purpose.

Colour of Flesh and Skin: White.

Colour of Legs and Feet: Dark grey.

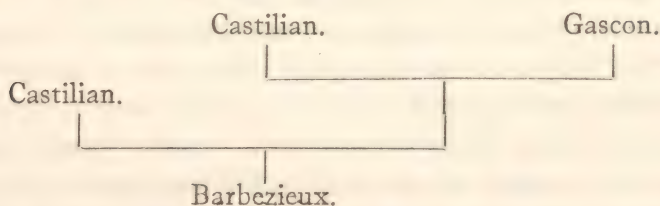
Colour of Egg-shells: White.

Although this race is generally included among the French breeds, as it is chiefly found in the Charente, the department to the north and



north-west of Bordeaux, for reasons given below we include it among the Spanish breeds. As a fact, it has been termed the French Minorca.

**Origin.**—Whilst it can easily be conceived that the Castilian breed would cross the Pyrenees into south-western France, we have no direct evidence of such migration. The appearance of the Barbezieux is, however, sufficient justification for that assumption. In this connection M. Lemoine says (14): ‘The race was created in the Charente, perhaps the result of a cross. Probably it is descended from the Gascon and the Spanish fowls.’ If so, it may be accepted that the Spanish, or Castilian, blood predominates, as the Gascon fowl is small in body, very short in the leg, and differs distinctly in type, although, like the Castilian, it has black plumage and a single comb. That there has been a cross is indisputable. The following may be accepted as representing the origin:



**History.**—So far as we have been able to learn by personal inquiries in the Charente, the Barbezieux has been bred there for a very long time. Nothing is known as to importations from Spain. Throughout the Medoc, and from the Gironde River to the Spanish border, fowls of this class are general, although they vary considerably in colour of plumage. In the Charente itself there is greater uniformity, due to selection and breeding. The changes to be noted from the Castilian, chiefly as to quality of flesh and greater development of maternal instincts, may be attributed to the rich soil of the district in which they are kept.

**Economic Qualities.**—‘The Barbezieux hen is a good layer; she is stated to yield an average of 150 eggs per annum, each egg weighing  $2\frac{1}{4}$  ounces. She is also an excellent sitter and mother, but prefers to select her own nest, does not like being disturbed, and is averse to confinement by reason of her lively disposition. The chicks are easily reared, and they develop quickly, but must be supplied with very

nutritious food from an early age.' (14). The flesh is delicate, fine in texture, and white. For table these birds are regarded with great favour, especially when roasted in front of an open fire of wood, as is customary. The muscle is not so abundant as on many other races of fowls, which can be expected from its ancestry. It is fine in quality.

**DESCRIPTION.**—This is a large, long bodied fowl, rather long in the neck and leg, following closely in carriage the Castilian, in that it is not so full in front as the Minorca; it has a long head, surmounted by a single comb, upright in the male, falling slightly over in the hen, well serrated, fine in texture, not very large; face red, as are the comb and wattles; earlobes white: the legs are strong and, with the feet, are of a very dark grey colour, having four toes.

**Variety.**—Only one, that already described, is recognised, although there are many speckled birds seen in the district, apparently offshoots of the breed.

### PRAT.\*

Nomenclature: Prat.

Varieties: Uncertain.

Classification: General Purpose.

Colour of Flesh and Skin: White.

Colour of Legs and Feet: White, or light-slate.

Colour of Egg-shells: Pinkish-white.

**Origin.**—This breed has been introduced and is generally found in the district of Catalonia, Spain, to the south and south-west of the City of Barcelona, known as Prat. Don Salvador Castello, writing in 1899, says (1): 'Twenty years ago the Cochin China fowl, which commanded great attention abroad on account of its exceptional size—larger than had been seen before, especially in hens, began to be largely introduced into the Peninsula; and it is supposed that it must have been crossed with the old indigenous breed, then still good, which was to be found in greater perfection in the Prat than in other districts of Catalonia, and where it was not subjected to so much attention or so much crossing. The result was a hybrid of greater size than the ordinary, usually tawny in colour, with feathered legs, which had never been a distinctive or dominant characteristic of the Southern breeds. Then, by a law of Nature, the above-mentioned characteristics began to disappear in order to return to the type of the hardiest breed, namely,

\* Plate XXII.



the Catalan, whilst the great size alone remained, being preserved by selection on the large farms of the Prat. In this way we can explain the existence in Catalonia of a breed which is much larger than is usually found in our Peninsula, and the disappearance of the other characteristics of the breed which caused this increase in size.'

**History.**—Since the period named this breed has advanced in favour, and has had the effect of greatly improving the fowls for flesh qualities found in the markets in that section of Spain. It is bred to an increasing extent and is generally met with. The table fowls in Barcelona are better than we have seen in any other part of the country.

**Economic Qualities.**—The hen of the Prat breed unites the quality of a good layer with that of a perfect mother, which makes her of great value on the farms. She lays between 100 and 130 eggs annually. Although not one of the most prolific races, this is compensated by the size of egg, weighing more than  $2\frac{1}{4}$  ounces; these are large and white, and have a reddish yolk, which adds to their value; the chicks are easily reared, though rather bare in the earlier stages. At three months they are fully feathered, and are very hardy. The flesh of the Prat is the best of all Spanish races. The birds fatten well, producing fine white flesh; the cockerels and pullets are very forward in their growth, ready for killing when four to five months old. It is uncertain in colour, but breeds sufficiently uniform to warrant inclusion among the pure races. It is being steadily improved.

**Description.**—We quote from Don Salvador Castello (1): 'A good size, weight,  $6\frac{1}{2}$  to 9 lbs. in cocks of a year old, and  $5\frac{1}{2}$  to 7 lbs. in adult hens. The breed has a single comb, erect in the cock, and rather drooping in the hen; colour buff, plain or golden breast, greenish in the cock, and tawny or partridge in the hen. The cock often has a showy red and metallic sheen, red face, white earlobes; the hackles and sickles very prominent in the cock; the tail carried erect, generally tipped with black in the hens; the legs which are free from feathers, are white or slate-coloured and pinkish, and at the base darkish horn-coloured; the hen has a deep body, the posterior appearing to be very large owing to the feathers; the cock is handsome and large; the hen carries much flesh, and lays large, pinkish-white eggs. The above is the general variety of the Prat, a district not many miles from Barcelona, whence it derives its name. There are found a considerable num-



ber of varieties differing from the description given, but never black or white ; some are met with having slightly feathered legs. These varieties, however, are seldom much appreciated, seeing that they recall the defects of one or other of the breeds that contributed to form the Catalana de Prat.'

### PARADISE.\*

Nomenclature : *English*, Paradise ; *French*, Paradis ; *Spanish*, Paraisos.

Variety : One.

Classification : Table.

Colour of Flesh and Skin : White.

Colour of Legs and Feet : Reddish-white.

Colour of Egg-shell : Pinkish-white.

**Origin.**—This, the only new breed brought out in Spain for a long period of time, was introduced by Professor Salvador Castello, of the Royal Spanish Poultry School, Arenys-de-Mar (Barcelona), and derives its name from his residence. Its introduction was in 1919. The foundation stock was the Catalonian Prat, already described. Three years previous to the date named a cross had been made between a Buff Orpington Cock and Prat hens of the same colour. Another cross was made between a White Orpington cock and White Prat hens. To increase the size of eggs and secure tighter feathering the progeny from the last named mating were crossed with a White Rhode Island cock. The result was so satisfactory that the Buffs were discarded by reason of their uncertainty in coloration. The Whites breed very true.

**History.**—For exhibition the Paradise fowl presents excellent and attractive features, and has commanded attention in Spain and France. It is being extensively distributed in North-eastern sections of the Spanish Peninsula.

**Economic Qualities.**—As indicated above the quality of table poultry in Spain has hitherto been very inferior. As a result of introduction of the Prat fowl a marked improvement took place in the City of Barcelona and Catalonia generally. This has been more manifest since the Paradise fowl was available. Consequently there is an ever growing demand for table chickens and fowls of good quality. The climatic and soil conditions around the city named are much more favourable to heavier and more meaty poultry than is the case in Central and Southern Spain. The breed named carries a considerable

\* Plate XXV.

amount of meat which is well distributed on the body, is white in flesh and skin, and excellent in flavour. The chickens grow rapidly. In Spring birds are marketed at from 2 to 2½ lbs. Winter fowls when well fed attain weights from 8 to 11 lbs. without special fattening. Eggs from this breed are good in size, are pinkish-white in colour of shell. Although the race has not been selected for high fecundity, records have been made of an average of 150 to 170 eggs per annum.

**Description.**—The Paradise fowl has not been bred long enough to warrant issue of a Standard of Points. Time must be allowed to elapse for development of definite characters and elimination of those which are undesirable. It has a broad, deep body with prominent breast, is long and broad in the back; head broad, surmounted by a small, single comb; eyes dark or orange coloured; earlobes small and red; legs strong with well developed muscles, and of medium length, reddish-white in colour, free from feathers, and with four toes on each foot; tail in cock is well developed with medium-sized sickles, in hens small; feathers close and firm; body colour entirely white. Weight: males, 7 to 9 lbs.; females, 6 to 8 lbs.

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CHAPTER VI  
BELGIAN RACES OF FOWLS.





## CHAPTER VI

### BELGIAN RACES OF FOWLS.

|          |                 |
|----------|-----------------|
| CAMPINE. | FLEMISH CUCKOO. |
| BRAEKEL. | HERVE.          |
| ARDENNE. | HUTTEGEM.       |
| MALINES. | BRABANT.        |
| BRUGHES. | ANTWERP BRAHMA  |

In no part of Europe have the peasantry shown greater skill in the production of valuable races of animals and birds, or have given more intelligent attention to their improvement upon practical lines, than in the Low Countries. That is especially the case in what is now known as Belgium. The inhabitants of that land are essentially practical. Their industry and thrift are proverbial. The æsthetic appeals to them to a very limited degree, even to the extent met with in neighbouring nations. Almost every foot of soil under control of these peasants is utilised by them profitably. This small country is thickly populated. Only by intensity of cultivation could so large a population be maintained. Among smaller races of birds the Homing Pigeon and the Belgian Canary, as well as several breeds of fowls, have originated in that country. More than in any other with which we are acquainted have domesticated animals and birds been employed to maintain the balance of Nature between animal and plant life. In all respects the Belgian peasants equal the French for their industry, skill, and attention to detail. We consider that in respect to experience in the art of breeding they may be given the first place among the nations of Europe. The amount of knowledge they possess is remarkable, considering the lack of education and home-staying proclivities.

They are self-contained, reserved, even suspicious. Our old friend, the late Louis Vander Snickt, stated that it is almost impossible to obtain revelations of their knowledge and of the traditions which have been handed down from father to son for generations. His explanation is that during the days of the Spanish dominion, more than 300 years ago, when the struggle for freedom extended for eighty years, they had enemies on every side, and traitors among their compatriots, so that they became reserved and suspicious. The instinct of self preservation was thus developed and became part of the national character, as it still remains. We have had on various occasions evidence of what is stated when travelling through the rural districts of Belgium.

The native races of poultry met with in Belgium are primarily of value for food production. At the same time a considerable amount of attention is paid to breed characters. During the last decades breeding for exhibition has extended greatly, which has led to a great extension of the number of breeds kept. The line of demarcation between fanciers and practical breeders is sharply defined. One fact, however, is evident, namely, that the Belgian races of poultry have not found acceptance to any great extent in other countries.

### CAMPINE.\*

Nomenclature : In all countries, Campine : except *German*, *Campiner* Morven ; *Danish*, *Kampinere* ; *Hungarian*, *Kampine*.

Varieties : Gold, Silver.

Classification : Non-sitting, Egg-production.

Colour of Flesh and Skin : Greyish-white.

Colour of Legs and Feet : Slate-blue.

Colour of Egg-shells : White.

**Origin.**—Fowls of the Campine type can claim great antiquity, and have been bred in the Low Countries for centuries. One writer (1) says ; ‘ They exactly answer to the *G. turcica*, or Turkish fowl of old Androvandus,’ whilst another states (2) that ‘ by tradition it dates as far back as 1206.’ It is probable that fowls of this type were common over a great part of Europe, and, as our fowls came from the East to the West, the suggestion as to the *G. turcica* has something to be said in its favour. Such divergencies of type as are met with even in Belgium, where both rose and singled combed fowls of Campine







SILVER CAMPINE (ENGLISH) COCK  
(Bred by Major W. M. J. Martin, Boreham Manor, Warminster,  
Wilts)



SILVER CAMPINE (ENGLISH) HEN  
(Bred by Lt.-Com. Nalders, Tangley Mere, Chilworth, Surrey)

*Photos, A. Rice*







BELGIAN BRAEKEL HEN  
(Drawing by Louis Van der Snickt)



BELGIAN BRAEKEL COCK  
(Drawing by Louis Van der Snickt)

character are found, are to be expected in the absence of fixed standards, and where economic qualities are the primary object. In this instance we have a breed which can claim purity of race over a long period—one of the few to be met with. Further than that we cannot go.

Whilst for a considerable period the Campine and Braekel have been separately designated, and the time has not come for classifying them as one, it may be accepted that they differ merely in size. Since the Great War of 1914-1918 the two have been brought more closely together, and it is probable that ultimately they will be reunited. In a letter to the Author the Secretary of the Braekel Club of Belgium writes :

‘ At international exhibitions our exhibitors, who had never thought of selection of the Campine, presented fowls under this name and obtained the prize of honour. They were simply late hatched Braekels, with the characteristics of the so-called Campine. At the international exhibition at Brussels in 1921, M. Pomlet, of Renaix, entered a silver Campine cockerel bred from his Braekels and was awarded the prize of honour for this bird.

‘ The following year at a similar show organised by the same society, M. Pomlet, finding that his Campine cockerel of the previous year had developed well, exhibited it as a Braekel cock, and this bird thus combining both breeds carried off the prize of honour awarded by the same judge.

‘ Our Braekel has existed from time immemorial and was known hundreds of years ago in the completely wooded part of our country, lying between Alost, Ninone, Grammont, Sottegem, Gand, Audenarde, Renaix, and Nederbraekel, and at that time was known under the name of woods hen. It successively bore the names of La Grise (Grey) ; poule de Renaix, and finally the Braekel, no doubt because 70 years ago the market of the commune of Nederbraekel, situated at a distance of 12 kilometres from Renaix, was the most important in the country where this breed of fowl was offered for sale.’

**History.**—The name given to the race is derived from its being so largely bred in the Campine country—that is, the dry, sandy plain lying between Antwerp and Hasselt, in the Province of Antwerp and Limburg, a district where activity of habit is essential to any breed, as the amount of natural food available is very limited. Under such



conditions small size of body is a natural result. Formerly the Campine was almost universal. Of late years, to meet an ever increasing demand for table fowls, the Malines fowl has advanced rapidly in the district.

Our first personal knowledge of the Campine was in 1886, during a visit to Belgium. They did not appear to offer any special attraction. Although reputed to be splendid layers the eggs were small. In 1897, during a further tour in the Low Countries, we were surprised to find that by careful selection the size of egg had been greatly increased, and that greater attention had been given to purity of type. Our notes, published at that time, led a number of English breeders to import Campines, and the breed attained a fair measure of success, chiefly in the hands of exhibitors. Our interest in the breed is by reason of its prolificacy. Unfortunately changes were made in the coloration of plumage by fanciers, and in the size of body, in many cases Braekels being purchased and disseminated as Campines, whilst in others the Pencilled Hamburgh was introduced. As a fact, the English Campine is more like a Braekel than the original, although the laying quality has been fully maintained. Belgian breeders have resented these changes. Concentration upon merely fancy points has hindered that wider adoption which was anticipated.

**Economic Qualities.**—The Campine is hardy, under favourable conditions, is precocious, a small eater, and an excellent forager. It does not, however, easily adapt itself to confinement, more especially when it has little to do in the way of scratching for food. The chickens are very rapid growers, and at an early age carry a considerable quantity of flesh, which is delicate. For this reason they have been largely used in Belgium for milk chickens (*poulets de lait*). Like all the non-sitting races, with increased age the flesh becomes harder and more fibrous. As an egg-producer the Campine excels. High averages have been secured, certainly well over 200 eggs per annum, and without what is termed pedigree breeding. The eggs are of a good size, in the case of adult hens weighing up to 2½ ounces. The Campine is most suited to light soils.

**Description.**—The body of a Campine, whilst small, is long, with a full, round breast, narrowing to the tail, neither wide or deep; wings large and neatly tucked; the head is long and fairly deep, sur-



mounted by a single comb, upright in the male, and falling over in the female, evenly yet not deeply serrated, and, with the wattles, of a bright red ; earlobes of moderate size, bluish-white, inclined to almond in shape ; neck is of medium length, well covered with hackle ; tail of the male has broad and full sickles and abundance of hackle ; legs are medium in length, with four toes, and dark slate-blue ; the carriage is graceful and the habit active. Weight : male,  $4\frac{1}{2}$  to  $5\frac{1}{2}$  lbs. ; female,  $3\frac{1}{2}$  to  $4\frac{1}{2}$  lbs.

**Varieties.**—Two, the Gold and the Silver, of which the latter are the more effective in appearance. The markings in both are similar, that is, pencilled on the breast and underparts ; neck hackles in Golds and Silvers are of the ground colour named below ; the back of the cock is also of that colour, whilst the rest of the body has broad bars of black, the tail also black, in the hens whilst the neck hackle is of the ground colour of the variety the whole of the body is barred or pencilled. It may be mentioned that the pencilling is not so clear as in the Pencilled Hamburg.

**Gold.**—The ground colour in this variety is of a golden yellow, not brilliant, in fact, rather dull.

**Silver.**—In this case the ground colour is silvery-white, very effective in well marked specimens.

### BRAEKEL.\*

Nomenclature : In all countries, Braekel.

Varieties : Gold, Silver, Black-headed, White, Chamois, Black, Blue.

Classification : Exhibition, Non-sitting.

Colour of Flesh and Skin : Greyish-white.

Colour of Legs and Feet : Slate-blue.

Colour of Egg-shells : White.

**Origin.**—What has been already said of the Campine is more or less true of the Braekel, which, from the evidence obtainable, is descended from the same stock. Such variations as are noted below are due to the different conditions under which they have been bred. The name was given for the reason that they have long been bred extensively in the neighbourhood of Nederbraekel in Flanders. M. Vander Snickt suggested (3) that these Belgian breeds, together with others found in Germany, Italy, France and Spain, came from the east by way of Russia. Whilst it is true that the races of poultry indi-

genous to Russia were brought thence from Asia, as were the European breeds long centuries ago, there is no evidence that the Braekel was obtained by way of the country named. It has been suggested that the larger size of this race is due to an infusion of Asiatic blood. For such supposition there is no evidence, and it was not the opinion of M. Vander Snickt, who regarded both the breeds as having the same origin, and in a letter to the Author (1898) said: 'We call Campines the Braekels that became smaller on the arid sands of the Campine (country) where, as you know, it is so warm.' The effect of soil and climate upon the evolution of breeds and varieties is considerable. As the same careful authority said (3): 'The Campine remains small upon the poor Campine sand, upon which it wanders to seek food. It deviates into the Braekel—that is, to say, becomes larger—upon the rich Flemish soil, where the farms provide the birds with succulent and abundant nourishment.' The two breeds are fed upon the same food, he explained, but the Braekel grows larger among the rich crops, and the Campine is denied the same opportunity. Nearly all the French authorities regard these two breeds as the same.

**History.**—The Braekel is chiefly met with in Western Belgium that is, in the Province of Flanders, where it has been extensively bred for a long period of time. Until recent years it was very little known outside that area. Fortune favoured the Campine in that it was bred more carefully near to Brussels, Malines and Antwerp. Hence it was taken up by amateurs, written about by students of poultry culture, and obtained classification at exhibitions. During several earlier visits we had seen many of these, not meeting with the Braekel until 1897.

Had our friend M. Vander Snickt, in the last named year, conducted Mr. A. F. Hunter (then Editor of *Farm Poultry*, of Boston, U.S.A.) and the Author to the Braekel country, instead to that of the Campine, probably it would have been the former which was introduced into Britain rather than the latter, as it was the published records of that visit which led to the first importation. Since that time large numbers have been brought over, presumably Campines but, as stated above, the majority of these were Braekels. Our first importation of the true Braekel was in 1898, when we found them to be splendid layers, without, however, the vigour of constitution desired.



**Economic Qualities.**—The following particulars are quoted from *Chasse et Pêche* (1898): ‘Its large eggs are so much sought for upon the markets, and the chickens also, that attention has been attracted to this fine old race. All the farmers (in West Flanders) large and small, breed them in preference to any other. The Braekel has, further, the speciality of producing the finest *poulets de grains* in the world. This precocity is not due to chance; it has been bred for during a long period. The chicken is no sooner out of the shell than the comb is developed; at three weeks the cockerels commence to crow; at six weeks they begin to drive about the hens. . . . The Braekel chickens are as much developed at six weeks as a Coucou de Malines at six months. They can be killed as ordinary *poulets de grains*; they can be fed in eight days, in order to give the appearance of fat fowls, to which they are inferior in size, but superior in quality.’ Like all the non-sitting races, with increasing age flesh qualities are lost. The breed is regarded as fairly hardy in its native land, and is remarkably prolific as a layer, the eggs having the deep orange coloured yolk which is regarded as the finest in flavour. It is very active, and matures very rapidly. Pullets have been known to commence laying at three months and three days old. The eggs laid by adult hens weigh about seven to the pound.

**Description.**—The body of the Braekel is large and square, resembling the Dorking in shape, but is never found with white legs or five toes; the breast is prominent and carried well forward; the neck is of medium length, well covered with hackle; the head is large, surmounted by a tall, long single comb, carried well before and behind, with several deep indentations, upright in the male, and falling on one side in the hen; wattles are medium in size; earlobes large, bluish-white; eyes black; the tail is full in both sexes, with large sickles on the male; legs medium in length, and, with the feet, on which are four toes, slaty-blue in colour, with white toe-nails; the carriage is alert and active. Weight: males 5 to 7 lbs; females,  $4\frac{1}{2}$  to 6 lbs.

**Varieties.**—The leading varieties are the Gold and the Silver, in both of which the pencilling is coarser and broader than in the Campine and are less regular. No other description is necessary, except that in the Silvers the ground colour is creamy-white, not silvery-white. Other than this the description of the Campine will apply, save in



respect to weight. Black and Blue Braekels are officially recognised in Belgium.

Pure White Braekels are sometimes produced, due to failure of the black pigment in the Silvers. They, however, retain black eyes, blue bill and legs.

Specimens with Chamois plumage have been obtained by crossing the Gold and White varieties. In these the yellow ground colour is retained, with white markings instead of black. This is a very pretty variety, one, however, difficult to breed.

Another variety is called Black-headed, in which the head and neck feathers are black or very dark-grey. These are claimed to be among the most vigorous and precocious of all the Braekels. Upon these the late Louis Vander Snickt wrote to the Author :

‘The Black-headed Braekel was derived, I think, from a cross with the Owl-bearded Dutch (See Dutch Races). The beard has been bred out, but the characteristic markings return by reversion. The Black-headed cockerels are very precocious, and assert themselves very early. As soon as the ornamental feathers are grown, the Black-headed cock is the same as the barred or pencilled, except that the tuft of feathers on his ears remains grey, and that he is marked on the breast by round spangles, as in the Owl-bearded Dutch and Spangled Hamburgh.’

Of the Braekel there is also a short-legged variety, called the ‘Braekel Courtes Pattes,’ probably due to a cross with the Courtes Pattes of France. Respecting this variety we again quote from M. Louis Vander Snickt :

‘There is no need for making short-legged Campines, as they must wander at liberty. In the land of Braekels, where population is very dense, the birds are bred with shorter legs in order to prevent their scratching in the neighbouring gardens. For the same reason the feet of these creepers are almost like those of ducks.’

## ARDENNE.

Nomenclature : Ardenne or Ardennaise.

Variety : One.

Classification : General Purpose.

Colour of Flesh and Skin : White.

Colour of Legs and Feet : Blue-grey.

Colour of Egg-shells : White.

**Origin.**—This breed is distributed throughout the Ardennes, on the southern and south-western borders of Belgium. No information is forthcoming as to its origin. From its appearance and wild nature we suppose that it has descended from a race bred under rugged conditions, crossed with one or other type of Game fowl.

**History.**—Here again we have no information, except that the breed has proved popular in the well-wooded Ardenne country, where it has been bred under natural conditions.

**Economic Qualities.**—The Ardennaise fowl is very hardy, and does not adapt itself to confinement. It is an excellent forager, wandering far in search of nourishment. The flesh is abundant, the skin fine, and it makes a splendid table fowl if hung long enough to soften. Ardennaise fowls, when pure, have the reputation of very fine flavoured flesh, as have the hams produced in that district. The hens are fair layers of medium-sized eggs. The breed has adapted itself to the cold, rocky Ardennaise situation, 1,200 to 1,500 feet above sea-level.

**Description.**—These birds are of medium size, with compact body, flat in front as are the Game; neck short and thick; head long and fine, with a short, strong beak; comb single, medium in size, regularly indented; wattles long and round; eyes red; face covered with fine feathers; wings large and carried low; tail full, with large sickles; legs medium in length, fine in bone, and five toes on each foot; the plumage in cocks follows the Jungle fowl, that is, like the Black Red Game, Brown Leghorn, &c.; tail feathers close and tight, appearing as if only one; the hens, as a rule, are very dark in plumage; these birds are active and nervous, easily frightened by strangers. Weight: males, 5 to 6½ lbs.; females, 4 to 5 lbs.

In the Liege district there is a common breed which is rumpless (*la poule sans queue*), which much resembles the Ardennaise, embracing all possible colours. It has black eyes, with grey or red earlobes.



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These fowls, kept on isolated farms are called *poules des haies* (hedge fowls). They are said to be good layers, hardy, are shy, and escape easily where there are many foxes.

### MALINES.

Nomenclature : *English, French, Spanish*, Malines ; *German, Danish*, Mecheliner ; *Dutch*, Mechelsche.

Varieties : Coucou, White.

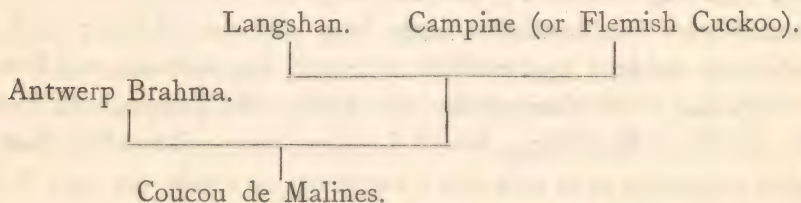
Classification : General Purpose.

Colour of Flesh and Skin : Cream.

Colour of Legs and Feet : Rosy-white.

Colour of Egg-shells : Pale brown.

**Origin.**—The Malines fowl is assumed to be the result of a cross between the Antwerp Brahma and the common fowl of the country, which was at one time the Flemish Cuckoo. From such evidence as is available it is probable that in the mid years of the Nineteenth Century, when this cross was made, there had not been very careful selection, and that the fowl of the country partook of the Braekel type, so far as plumage markings were concerned, which would explain the Cuckoo colour, though that is by no means uncommon where birds with white and black feathers are mated. The late Louis Vander Snickt suggested (3) that other influences are apparent, and that the Langshan had been employed at a later period as well as the Brahma. This is supported to some extent by the tendency to black in plumage and by the single comb. It is probable that the Coucou de Flandre had been used. Evidence is, however, wanting. We may accept the following table of descent as approximately correct :



The first introduced was the Cuckoo variety, from which the Whites are sports.

**History.**—It would appear that birds of this heavier type have been known in Flanders for centuries. The modern form was intro-



duced by M. de Winter from 1850 to 1860 in the Malines district—that is, the section of the country to the North-east of Brussels, and has since been extended to the borders of the Escaut, near Termonde. During visits to these districts we found, in pre-war days, that it had attained great popularity and that large numbers were bred and reared to supply Brussels and other markets with fine table fowls. At that time large quantities of these birds were exported to Germany. The demand for large-bodied, well fleshed birds was met almost entirely by the Malines fowl, to which the name *poulardes de Bruxelles* is given. This race has not extended much beyond the country of origin. Where introduced it has proved very useful for supply of winter birds.

**Economic Qualities.**—Although the Malines fowl is bred primarily for its table properties, it is included in the General Purpose breeds, by reason of the fact that it is thick in bone which, however, is soft, and that it is not a very rapid grower, though superior in this respect to most of the breeds included in the same classification. The flesh produced, which is creamy-white, is more upon the thighs than in the purely table breeds. It is excellent in quality, and the birds fatten rapidly, due to their quiet disposition. These birds are killed before they are six months old, and grow rapidly, often increasing in weight at the rate of  $2\frac{1}{2}$  lbs. per month after the first few weeks. As might be anticipated by the origin, it is a very hardy fowl, and the chickens are easily raised. The hens are devoted sitters and mothers, becoming broody after they have laid about twenty eggs. They are, however, somewhat clumsy. The hens are fair as layers, producing eggs which vary considerably in size, and are small in comparison with that of the hen producing them, or of the chickens emerging therefrom, as is usual with all the Asiatic breeds. The eggs are very round, and are pleasingly tinted. These birds are, as a rule, satisfactory winter layers.

**Description.**—The Malines fowl closely follows the shape and feathering of the Asiatic races, much more so than does the Plymouth Rock. It is large in body. We have seen an adult cock weighing nearly 13 lbs. That was exceptional. The body is long, deep and massive, with a prominent breast and straight keel; neck short, well curved, and thickly covered with hackle; head strong, well proportioned to the size of the bird, with a reddish-white beak, pen-

cilled with black ; eyes orange ; comb single, small in size, standing upright, and partaking of the Langshan character, not deeply serrated ; wattles long and, like the comb and face, red, as are the earlobes ; wings short, small, and carried close to the body ; thighs and shanks are long, the former covered with a soft cushion, the latter and the feet feathered on the outer side, but should not be heavy in this respect ; feet strong, and the toes four in number ; legs and feet pinky-white in colour ; in the cock the tail sickles are short. Weight : males, 9 to 11½ lbs. ; females, 8 to 10 lbs. In temperament these birds are very quiet and do not wander much.

**Varieties.**—As might be expected from the origin there are many variations, namely, black, yellow, etc. some of which by selection may become fixed. Blacks are said to be vigorous and hardy. Some birds are met with having triple combs, like the Brahma.

**Coucou.**—In plumage the colour throughout is what we call by this term—that is, the ground is blue-grey, each feather marked with bars of dark blue, shading into pale blue. The clearer the distinction between these the better. The neck hackle is more even than is the body plumage. Sometimes the tendency is to greater density of colour. That, however, should be avoided, as the paler ground colour is to be preferred. It should show the markings clearly, and give the appearance of a light-coloured fowl.

**White.**—In these the plumage is entirely white, and is very pleasing. These are preferred by exhibition breeders. Those engaged in fattening say that the Whites do not make the same quality of table birds, and state that the Cuckoos are much hardier.

### BRUGES OR COMBATTANT DU NORD.

Nomenclature : *English, Danish, Hungarian*, Bruges ; *French, Belgian*, Combattant de Bruges, or Combattant du Nord ; *German*, Belgische Kaampfer ; *Dutch, Brugsche* ; *Spanish*, Brujas.

Varieties : Red, Black, White, Blue.

Classification : Exhibition, Table.

Colour of Flesh and Skin : White.

Colour of Legs and Feet : Lead.

Colour of Egg-shells : Light tint.

**Origin.**—Fowls of the type known as Bruges are common in the Netherlands and in the north of France as well as parts of Belgium, the origin of which is very uncertain. It has been claimed by some



authorities, based on tradition rather than evidence, that the race has been known for centuries. Others suggest that it is the result of a cross between the Malay and the fighting Game fowls which were common in various parts of Europe. That the Bruges possesses many indications of Malay blood cannot be questioned as the appearance at once shows. Only in the case of the egg, which is very large, are there signs of other influences.

**History.**—In this direction there is little to be said. Never popular even with amateurs and exhibitors, and little known outside its own district, it has maintained its individuality and is regarded as useful for table purposes.

**Economic Qualities.**—The chief quality is that just stated. These birds carry a wonderful amount of flesh, chiefly upon the breast, which, however, like all corresponding races, is very firm and hard, and the birds require to be well hung after killing. For that reason they are found to be most serviceable when crossed with softer-fleshed breeds. As might be expected, they are not quick in growth, and are mostly used for winter fowls. The hens are moderate layers, the eggs, as already stated, large and very rich in flavour. They make good sitters and mothers. Old and young birds are very hardy, splendid foragers, but require full liberty. The chickens are precocious, and the cockerels at an early age show their pugnacity.

**Description.**—In appearance this breed clearly indicates its relationship with fighting stock, as shown by its powerful limbs and wings, with long reach and hard muscle; it is very large, has a well developed breast, massive in front; neck long and strong, well covered with hackle; head large and long, very strong; eye large and bright; comb and wattles small, the former uneven; earlobes small, red; tail rather full; legs long and strong, well furnished in the male with spurs; feet large and well spread, four toes on each foot. Weight: males, 9 to over 11 lbs.; females, 8 to 9 lbs. The breed in shape resembles the Malay and Cornish Game, and is somewhat heavier in body.

**Varieties.**—As in Game fowls generally there are diverse colours, which need not be fully described. Blacks are regarded as the most vigorous. A favourite is the Blue, so-called, which, however, is not very pure in colour.



## FLEMISH CUCKOO.

Nomenclature: *English*, Flemish Cuckoo; *French*, *German*, *Dutch*,  
Coucoude Flandre; *Hungarian*, Flandiai Kendermagos.

Variety: One.

Classification: General Purpose.

Colour of Flesh and Skin: White.

Colour of Legs and Feet: Pinky-white.

Colour of Egg-shells: Medium Yellow.

**Origin.**—Met with to a limited extent on the Belgian and French border, very little is known as to its origin. Fowls with Cuckoo plumage are common in many countries. The modern Coucou de Flandre has apparently been evolved from these. M. Vander Snickt stated (3, 1900) that 'the Coucou de Flandre is the ancient Coucou de Malines, which existed for more than fifty years before it was increased in size by crossing with the large Light Brahma of Antwerp.'

**History.**—In Belgium the Flemish Cuckoo is chiefly in the hands of a few breeders, who have done much to fix its characters. As yet it has not met with much in the way of popularity.

**Economic Qualities.**—The race is very vigorous, and is especially suited to heavy soils and upon lower-lying lands where fogs prevail, such as are common in many parts of the Low Countries. The hens are excellent layers of large eggs, which are fine in quality. Laying usually commences when the pullets are about seven months old. They are good winter layers, and make reliable sitters and mothers. The chickens grow quickly, and are ready for table when three to four months old. The flesh is delicate, white in colour, and fairly abundant. In relation to the size of body these birds are light in bone.

**Description.**—The Coucou de Flandre has a large but not heavy body. It is very round, prominent in breast, with a short back and wings; neck medium in length, covered thickly with hackles, which just touch without covering the shoulders; head short and thick; it is surmounted with a large single comb, well serrated, and carried low behind without touching the neck; beak short, strong, either white or lightly ticked with pale horn colour; the tail is short and carried high; legs strong and of medium length, yet fine in bone and pinky-white, sometimes ticked with blue-black, or in chickens with grey; there are four toes, which have white or clear horn nails.

Weight : males,  $6\frac{1}{2}$  to 9 lbs. ; females,  $4\frac{1}{2}$  to 6 lbs. The colour of the plumage in both sexes is clear or silver-grey, each feather crossed by bars of blue-black. Generally there is considerable white at the root of the tail.

### HERVE

Nomenclature : *English, French, Danish, Spanish*, Herve ; *German*, Selfkanter ; *Hungarian*, Liegei.

Varieties : Black, Blue, Cuckoo.

Classification : Egg-production.

Colour of Flesh and Skin : White.

Colour of Legs and Feet : Black and Blue, dark ; Cuckoo, White.

Colour of Egg-shells : White.

**Origin.**—We have been unable to obtain any information as to the origin of this breed, which is bred to a limited extent in the eastern districts of Belgium. It shows a considerable degree of Hamburg character, though longer in the legs.

**History.**—Whilst fowls of this type are met with generally in the Liege district, the better specimens are in the hands of exhibitors or amateurs. It has not attained any amount of favour elsewhere.

**Economic Qualities.**—Whilst very prolific the eggs are small. The birds are very hardy, and thrive well on the high plateau of what is known as the Herve country, in the Province of Limburg, to the north of Liege. On these rocky hills cattle and poultry alike are smaller than on the rich pastures of the west. For example, the cows kept here are of the same race as the Dutch, which latter are half black and white, and weigh upwards of 2,000 lbs., whilst those of Herve are nearly black, and do not weigh more than 1,200 to 1,300 lbs. The same is seen in fowls. The chickens are very precocious, and are largely used when young as milk chickens (*poulets de lait*), for which purpose they are excellent. When older they do not carry much flesh.

**Description.**—This is a small, active breed, almost as diminutive as are some races of Bantams ; body long, rather flat in front, showing the thighs clearly ; neck of medium length, well covered with hackle ; face clean and red ; comb single and small in size, the spikes thin and narrow ; wattles small ; earlobes red ; it has well spread toes, of which there are four ; the tail in the male is carried high, with not very abundant sickles. Weight : males, 3 to  $4\frac{1}{2}$  lbs. ; females,  $2\frac{1}{2}$  to  $3\frac{1}{2}$  lbs.



**Varieties.**—Black is most common. It is entirely black in plumage, with black legs and feet, and white toenails. The eyes have black iris.

**Blue.**—Termed Manheid. The ground colour is blue or slate, each feather tipped with black.

**Cuckoo.**—Called Cotte de Fer, in which the plumage is that known as Cuckoo.

### HUTTEGEM.

Nomenclature : In all countries, Huttegem.

Varieties : Gold Cuckoo, Ermine, and many others.

Classification : General Purpose, Heavy Sitters.

Colour of Flesh and Skin : White.

Colour of Legs and Feet : Bluish-white.

Colour of Egg-shells : Tinted.

**Origin.**—The Common fowl of West Flanders (*race couveuse*) has been known probably for centuries on the meadow lands of the Scheldt in Belgium, though the modern Huttegem differs considerably from it. This is due to the Malines introduced last century, which has changed its character. The suggestion has been made that the Golden Braekel, the Buff Cochin, and the Bruges have also been employed in its creation. Upon this point there is no certitude, as there are no definite records as to its origin. The appearance of the fowl justifies the above statements, of which, however, there are no actual records. The Audenarde district of Belgium is very moist. Evolution of the Huttegem fowl has been in response to the need for a hardy, vigorous breed, able to meet the local conditions.

**History.**—In the district bearing on the Escaut river in Flanders large numbers of ducks are bred in winter. As the soil is very humid, a hardy fowl is essential to undertake the hatching and rearing of the ducklings. These are reared on the ice and in the snow from October to mid-April, and the Huttegem fowl has been developed to undertake these maternal duties, as it is vigorous, able to withstand the moist conditions, covers a good number of eggs, and is a persistent sitter and mother. As might be expected for such purpose, small attention was at first paid to external characteristics. In process of time the two types named below were evolved, produced for a special purpose and owing much to the Malines fowl.



**Economic Qualities.**—Everything has been concentrated upon the brooding quality, with the result that these hens will continue to sit for nearly three months on successive hatches of eggs. A hen will cover seventeen to nineteen duck eggs and hatch a large proportion of these. As chickens these birds are somewhat slow in growth. They fatten well both as chickens and when older. The flesh is excellent in quality, and the eggs are large in size and of a medium tint. The hens are very moderate as layers.

**Description.**—The body of the Huttegem is large, so that the hens may cover as many eggs as possible. It follows the Cochin, except that a cushion is not desired. There is, however, an abundance of fluff, modified to some extent by the Bruges influence already mentioned. The neck is thick, with a well developed throat and the head is large. The legs are short and well covered with feathers, thus again following the Asiatic parentage, and the body feathers are soft. There are four toes on each foot. Weight: males, 9 to 11 lbs.; females 7 to 9 lbs.

**Varieties.**—There are single and rose-combed varieties, in both of which the plumage is what is known as gold; that is, very similar to that of the Partridge Cochin. The markings, however, are different.

**Gold Cuckoo.**—In this variety the neck-hackle is barred, giving a cuckoo marking, and the back, thighs and underparts are similar; the comb varies from single to rose; earlobe red, ticked with white; legs and feet bluish-white.

**Ermine and Buff.**—These show more of the Brahma character, at any rate in the neck hackle, which is striped with black. Usually the comb is rose, and the legs and feet are pink, ticked with blue.

## BRABANT.

Nomenclature: *Belgian, Danish, Brabanconne; German, Dutch, Brabanter; Hungarian, Brabanti.*

Varieties: Black, and others.

Classification: General Purpose.

Colour of Flesh and Skin: White.

Colour of Legs and Feet: Light slate-blue.

Colour of Egg-shells: White.

**Origin.**—How long this type of fowl has been known in the south-eastern districts of Belgium cannot be stated. It is claimed to be a

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very ancient race, kept to a considerable extent in the Walloon Provinces, from Brussels to Luxembourg. The individual characters are very defined. It has evident relationship with the White-crested Black Polish, which on the continent of Europe is known as *Hollandais*—that is ‘Dutch’—as the last named breed is undoubtedly a native of Holland. The late Louis Vander Snickt states (3, 1898) that the Brabant ‘is very common, not produced by crossing; it is, on the contrary, an ancient race preserved pure for a very long time, but which, after having been neglected certainly for more than a century, persists by atavism in returning to the original type. Its success is due to its remarkable qualities.’ Beyond this we have been unable to proceed. There are those who believe that the type has existed in Belgium for hundreds of years. We have already seen that fowls of what we term the Polish race have been known in France for a long time (see *Crèveœur*). All that is known is to the effect that what is called the Brabant fowl has been common in parts of Belgium far beyond the memory of man.

**History.**—The name *Brabanconne* was given to this race by Louis Vander Snickt, who spent many years in studying the various races of poultry met with in the Low Countries, and to whom was largely due the preservation from extinction of these, and the adoption of definite lines upon which breeders could proceed to secure a measure of uniformity. He kept in view the economic quality of any fowl or bird which he bred or induced others to breed. Whilst he regarded the adoption of fixed standards as essential to progressive aviculture, productivity in one direction or another was placed foremost. Our attention was first called to this breed in 1897, prior to which date it had been undergoing the process of selection.

**Economic Qualities.**—The vigour and hardihood of this race are its chief merits, as it is specially suited for farm purposes, more especially upon land supplying a considerable amount of nutrition. It is a remarkably good layer of large, white-shelled eggs. The hens are practically non-sitters. The chickens are hardy and fairly precocious. The hens lay early, and are prolific in winter. The males are very virile, and will serve as many as eighteen hens. Pullets naturally commence to lay when five months old. The shells of the eggs are thick, and they carry well. In respect to table properties the breed



compares favourably with many others. When the birds are young they carry a good quantity of flesh, becoming somewhat hard when older. The Brabant is a fowl worthy the consideration of practical poultry-keepers.

**Description.**—The Brabant is large in body, without being heavy in bone, and is hardy. The shape indicates a good layer, as it thickens considerably from breast to stern, with great development in the region of the egg organs. The posterior of the body is carried low, although the legs are not short; neck of medium length, and very fine; comb small, single and folded over the beak, above which is a small crest, apparently larger in the hens than the cocks, as in the latter the head feathers are flat; the comb of the male is carried erect; the crest is not globular; plumage in the best specimens is black throughout, though some show a considerable amount of red. Black, however, is preferred, and is decidedly most pleasing in appearance; eyes black; legs and feet light slate-blue.

Much discussion has arisen as to the colour of the earlobe, though white is preferred for the reason that it is suggested white lobes accompany heavy egg-production. That is a subject reserved for further consideration. It is of interest to note that an experienced Belgian breeder states that he obtains the largest eggs from medium-sized hens, thus confirming experience elsewhere.

### ANTWERP BRAHMA.

Nomenclature: *Belgian, French, Brahma d'Anvers; German,*

*Antwerppener Brahma; Hungarian, Anversi Brahma.*

Varieties: Ermine, White.

Classification: Table.

Colour of Flesh and Skin: White.

Colour of Legs and Feet: White.

Colour of Egg-shells: Tinted.

**Origin.**—This breed was imported directly from China many years ago to the Antwerp Zoological Gardens as a single-combed fixed type. It would appear to be a pure Shanghai, and thus differs from both the English Brahma and Cochin.

**History.**—Although of comparatively recent introduction in the latter part of the Nineteenth Century, its influence in Belgium has been considerable.



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**Economic Qualities.**—A hardy, vigorous fowl of large size, said to be most prolific as a layer, and especially in winter. The hens are excellent sitters and mothers. Chickens grow fast, and the meat is well distributed and good in quality.

**Description.**—In general characteristics the Antwerp Brahma closely follows the Light Brahma, except that it has white skin, legs and beak, not the yellow which is a feature of the last named. How this change has been brought about has never been explained. It would indicate a cross, which is supported by the fact that it has a single instead of triple comb. It is feathered on the legs and feet as are the Brahma and Cochin.

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CHAPTER VII  
DUTCH RACES OF FOWLS.





## CHAPTER VII

### DUTCH RACES OF FOWLS.

BREDA.

CRESTED DUTCH.

OWL-BEARDED DUTCH.

FRIESLAND.

DRENTE.

BARNEVELDER.

We have already noted that the Low Countries, in which term the modern kingdoms of Belgium and Holland are included, the date of whose separation was 1830, have been celebrated for the breeding of poultry for centuries, and that one, at least, of the British races, the Hamburg, had the foundations laid there. The same is probably true of a number of the German races of fowls. As can be appreciated, it is difficult in some cases to decide which breeds belong to Belgium and Holland respectively. For example, the Brabant fowl is met with in both countries, and may be equally claimed by each. It is included among the Belgian races for convenience, due to the geographical fact that the province from which its name is derived is part of that kingdom, without any suggestion that it exclusively belongs thereto. In fact, it appears to be as common in Holland as in Belgium.

One important point should be remembered, namely, that so long as the Low Countries were united the generic terms Holland or Dutch were applied as much to Flanders and Brabant as to Friesland. Consequently the name 'Dutch Everyday Layers,' given at a former period to Pencilled Hamburgs, might also refer to fowls introduced from what is now Belgium. From the natural conditions of the country, the more southern portions of the Netherlands, i.e., Belgium, are more favourable to breeding of poultry than the low lying lands which

form so much of Holland. The Belgians have always been more disposed to practical poultry-keeping than the Dutch, the latter of which have found greater attraction in the development of fancy or external characters. In that respect a change has been brought about within recent years, one sign of which is the evolution of the Barnevelder fowl. Further, the ever growing consumption of eggs and poultry in Holland, and the advancing trade in these with Britain and Germany has given a great stimulus to this aspect of Poultry Husbandry.

### BREDA.

Nomenclature: *Dutch, German, English, Spanish*, Breda, or Guelde;

*French*, Poule de Breda, or Poule à bec de Corneille.

Varieties: Coucou, Black, Blue, White.

Classification: Table and Eggs.

Colour of Flesh and Skin: White.

Colour of Legs and Feet: Slate-blue.

Colour of Egg-shells: White.

**Origin.**—Formerly the Breda was bred to a much greater extent in Holland than is now the case. It owes much to Asiatic influence. There are, however, no definite records as to the basis upon which the breed was formed. In this connection should be remembered that Holland has been a great colonial Power, and has now considerable possessions in the Far East. Under such circumstances frequent importations took place, some of which were crossed with native breeds. These have profoundly modified the poultry of different countries, and the same process is still at work, to an ever increasing extent.

**History.**—From such evidence as is available, the Breda fowl was at one period largely kept in Holland. The introduction, however, of other breeds, which were either more attractive in character, different from those already kept, or, as a result of change of conditions, more profitable, displaced these for production. Within recent years the breed has regained a part of its former position. It has not, however, found many adherents elsewhere, except to a limited extent in Northern France and Germany.

**Economic Qualities.**—The Breda is very hardy, a good forager,



and the chickens are easily reared, except that they are slow in feathering, during which process they must be protected from cold. The hens are prolific layers of large sized eggs, and they sit but rarely. As is usual with the more heavy breeds the chickens are not rapid in growth. The flesh, which with the skin is white, is well placed on the breast, and is good in quality. At a suitable age the birds fatten excellently, and add greatly to the total weight. This breed thrives well in confinement if supplied with an abundance of green food.

**Description.**—The Breda is a large-bodied fowl, well developed, with prominent breast, strong thighs, and rather long legs; back broad and slightly sloping to the tail; neck short and well arched, covered with an abundant hackle; head strong and long, with a stout, well-curved beak, which is dark at the base and of a light horn colour at the tip; the comb is rudimentary, broad, covering only the front of the skull, and having a depression in the centre which is unique; behind is a very small crest of short feathers which lie towards the back; face and wattles red, the latter round; earlobes generally white; the cheeks are full and bare of feathers; the iris of the eye is red and the pupil black; the toes on the feet are of medium length, and on the outer side, as also the legs, slightly feathered, thus showing affinity with Asiatics; colour of the legs and feet slate-blue; tail in the male is very abundant, and carried well up. Weight: males,  $6\frac{1}{2}$  to 9 lbs.; females 6 to  $7\frac{1}{2}$  lbs. In appearance these fowls are very upright, active in habit, and sprightly in carriage.

**Varieties.**—The Cuckoo Breda is generally called Gueldre. The feathers in both sexes, with the exception of sickles in the cock, which are black with grey grain-like markings, have a ground colour of grey with transverse semi-circular bars of black, giving what is known as cuckoo plumage.

Black and White are self coloured, according to the colour named. The Blacks are brilliant, having metallic violet reflections.

Blues are less common, the plumage of which is a mixture of slate and black, presenting all the difficulties met with in fixing this colour on any race of fowls.



## CRESTED DUTCH.\*

Nomenclature : *Dutch*, Hollandsche Kailhoender ; *English*, (one variety), White Crested Black Polish ; *French*, Hollandais Huppe ; *German*, Hollandsche Kuifhoen ; *Italian*, Olandese a Cuiffo ; *Spanish*, Holandesa Crestada.

Varieties : Black with White Crest, Blue with White Crest.

Classification : Exhibition, Non-sitting.

Colour of Flesh and Skin : White.

Colour of Legs and Feet : Blue-grey.

Colour of Egg-shells : White.

The race which is designated under the above title is, so far as concerns one of the varieties, usually termed in English-speaking countries White-crested Black Polish, and is well known under that name. Many writers classify all the so-called Polish together, which plan is followed by the American Poultry Association and the English Poultry Club in their respective Standards. Careful students, however, whilst using the general nomenclature, recognise the Crested Dutch as distinct from the Gold and Silver Chamois Polish, etc., which are termed Padoue. That this division is correct cannot be questioned. Hence we deal with the Dutch under the above title. In doing so we are following the custom generally adopted elsewhere, and especially in Holland itself.

**Origin.**—The Crested Dutch has been known in Britain for more than a century. Bewick refers to it in his ‘British Birds,’ and Moulbray thus speaks of it under the term ‘Poland’: (1) ‘The Poland fowls, as they are generally called, were chiefly imported from Holland. Their colour is shining black, with white tops on the head of both cock and hen. The head is flat, surmounted by a fleshy protuberance, out of which spring the crown feathers on top, with the fleshy King David’s crown, consisting of four or five spikes. They are not so thickly covered with feathers as some other breeds, and still less so with down. Their form is plump and deep, and the legs of the best species not too long.’ It is evident that the Crested Dutch were well known at the time stated. Buffon mentions that the type of fowl was known in France in the eighteenth century. Wingfield and Johnson state (2) that ‘if we are content to trace the countries through which we have received these fowls, it appears highly probable that they were introduced into the Netherlands by the Spaniards during their occupation

\* Plate XXVIII.



PLATE XXVIII



WHITE-CRESTED BLACK DUTCH COCK



of the Low Countries ; and from Germany, Holland, Belgium, and latterly Marseilles, we have been in the habit of receiving our best specimens. To all who are acquainted with the pictures of the Dutch school the Bearded Polish is known as a frequent feature.' This is supported by Mr. B. P. Brent writing about the same period, who said (3) : ' Polands, from what information I can gain, appear to have been brought by the Spaniards, by them taken into the Netherlands, and thence we received them.' What the East here means is difficult to trace, for every trading country at that time, if beyond Spain, was regarded as East or West. From the peculiar characteristics of these fowls, explained when dealing with the Polish races proper, it is probable that they were brought from Italy to Holland, and that they own the same ancestry as the Polish or Padoue, being bred in Holland on different lines. At this point it is unnecessary to trace the descent further. The Dutch and the Belgians for centuries have been skilled breeders of poultry, and whatever came into their possession was modified in accordance with their own ideals, of which fact a striking instance is the White-faced Black Spanish. Further, at the period referred to, the intercommunication between the Netherlands and Italy, political and commercial, was very great. As already noted, the Italian Polverara has several features in common with the Crested Dutch, and by breeding could in a few years be made to resemble it.

**History.**—Bred first to a measure of perfection in the Netherlands, the Crested Dutch was distributed over Western Europe, and, so far as we have traced, was introduced into Britain about the close of the eighteenth century, probably at the time of the Napoleonic Wars, when so many English were in the Low Countries, or may have been brought over a century earlier, during the Stuart period, by political refugees from England who resided for a time in Holland, or, again, might have been introduced by Dutch settlers in England who fled from the Spanish tyranny. At first they were called Poland fowls, but as early as 1838 (4) the term Polish was used alternately, and about 1850 became general. These birds have always had a limited number of admirers, but have never become popular, for reasons stated below. The Crested Dutch is one of our most beautiful fowls.

**Economic Qualities.**—The Crested Dutch has excellent qualities,

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in that it is very gentle and thrives well in confinement on dry soils and in a favourable climate. The hens are exceedingly good layers of large white-shelled eggs, which are fine in flavour. They sit very rarely, and are usually classed as non-sitters. The flesh upon the body is more abundant than is general with lighter-bodied fowls, especially upon the breast, and is excellent in flavour. Any race, however, which carries a large crest is subject to cold in a moist climate, from the fact that the head feathers absorb rain during unfavourable weather. Had it not been for what is here stated the Crested Dutch, and also the Polish, would have proved among the most valuable of egg-producing races. To keep specimens in good form they must be protected against rain. The chickens are difficult to rear during the feather forming stage. As a consequence this breed is kept chiefly for exhibition or ornamental purposes.

**Description.**—The standards adopted in Britain and America have erred in classifying the Crested Dutch and Polish as of one breed. We, therefore, adopt the Continental division. M. Perre de Roo says (5) : ‘At the first we find a striking analogy of conformation between this race (Crested Dutch) and the Padoue (Polish). This analogy is more apparent than real, and there exists between them marked differences which warrant us in not confounding or identifying the two races. Smaller, but more active and alert, a better forager, and more prolific than the Polish, the Crested Dutch has the wattles extremely developed in the cock and reduced to the smallest proportion in the hen, and they differ in the absence of a beard or muff. As a layer the hen is more prolific and more prolonged in production than the Polish ; and Dutch fanciers, who recommend them warmly for the formation of a laying flock, attribute to them all the merits of the common fowl.’ The body is deep and short, with large shoulders and a prominent breast ; wings are of medium length, carried close to the body ; neck short and strong, fully furnished with long, narrow hackle ; earlobe white ; head short and large, with a bright horn-coloured beak ; the comb is rudimentary, consisting of two or three small spikes ; the crest is large, falling from the centre all round in the cock, and globular in the hen ; there is no beard, whiskers, or cravat ; legs short and strong, with fine feet, on which are four toes, and of a dark slate-blue colour ; tail very full, and in the cock abun-



dantly furnished with sickles. Weight : males, 5 to 6½ lbs. ; females, 4 to 5 lbs.

**Varieties.**—Of these there are two, the best known of which is the White-crested Black, in which the plumage is entirely black, frequently with metallic reflections ; the crest in both sexes should be entirely white. That, however, is difficult to obtain in perfection. As a result trimming is resorted to in exhibition specimens, which is a further explanation of the non-popularity of the breed.

Blue with White Crest is a variety found in the Low Countries, to a lesser extent than the former, which it resembles in all respects except body plumage. That should be slate-blue, marked with dark-grey. It is not so striking as the Blacks.

Reports are to the effect that there has existed a race of Black-crested White Dutch. We have never seen any specimens, although we have sought for them. Many breeders have endeavoured to secure such birds, without success.

### OWL-BEARDED DUTCH.

Nomenclature : *English*, Owl-bearded Dutch ; *Dutch*, Uilebaard ; *French*, Barbes Neelandais ; *German*, Niederländisch Pausbackchen.

Varieties : Black, Gold-laced, Silver-laced, White.

Classification : General Purpose.

Colour of Flesh and Skin : White.

Colour of Legs and Feet : Slate-blue.

Colour of Egg-shells : White.

**Origin.**—It is very evident that the race under review owns the same ancestry as the Bearded Thuringians described among the German breeds. M. Houwink suggests that it is probably a cross between the Hamburgh and the Brabant, but acknowledges that birds of this type are frequently met with in Thuringia and the Hartz mountains, from whence it was evidently derived in the first place, at what period is unknown. The relationship to the two breeds named above is not at all likely.

**History.**—Upon this aspect very little evidence is forthcoming. If the relationship with the Bearded Thuringian is accepted, it may be regarded as coming from Germany. The chief difference between the German and the Dutch is that the former has a large single comb, whereas the latter is small and horned in comb.



**Economic Qualities.**—This breed is very hardy, easily reared, a good forager, and lays well if given plenty of exercise. The hens lay medium sized eggs, which have the peculiarity of being nearly round. They are good sitters and mothers. The flesh is well distributed. They are, however, small in size of body.

**Description.**—In carriage these fowls are very graceful; body round with a full breast; back short; neck of medium length, well covered with hackle; head small, with short horned comb; beak strong at the base and short; the wattles are very small, and together with the earlobes, which are pinkish, almost hidden by the full beard, standing well out from the cheeks and around the throat, giving the breed a distinctive character; tail in the male is carried high, with sickles of moderate length; legs medium in length, fine in bone, clean, slate-blue in colour; four toes on each foot, with white nails. Weight: males,  $4\frac{1}{2}$  to  $5\frac{1}{2}$  lbs.; females, about 1 lb. less.

**Varieties.**—In the Black and White respectively the plumage is self-coloured throughout, including the beard, showing a glossy black in the former, which has a dark horn beak, and silver white in the latter.

**Gold-laced.**—The ground colour is golden bay, with black lacing, usually to a greater extent in the hen than the cock. The latter has a dark breast, slightly laced, striped hackles, bright bay wing-bows and flights; there is a broad bar across the wing; tail and beard black, beak light horn.

**Silver-laced.**—In this variety the ground colour is silver-white. In all other respects it resembles the Gold-laced.

## FRIESLAND.

Nomenclature : *English*, Friesland; *Dutch*, Friesche Hoenders; *French*, Poules Frissonnes; *German*, Friesische Hühner.

Varieties : Gold-pencilled, Silver-Pencilled, Yellow-Pencilled, White, Black, Cuckoo.

Classification : Non-sitting, Egg-production.

Colour of Flesh and Skin : Greyish-white.

Colour of Legs and Feet : Slate.

Colour of Egg-shells : White.

**Origin.**—These fowls appear to have been bred for a long time in Northern Holland and Western Germany, and were formerly known

as Assendelfters. Definite information as to their origin is unavailable. From the appearance of the Friesland fowl it would seem that these and the Campine own a common ancestry. Such variations as have manifested themselves may be attributed to the different conditions met with in Holland and the Campine.

**History.**—Dutch breeders have made the claim that the Friesland fowl is the progenitor of the Pencilled Hamburg, which is probable, though the descent may have been from the Campine. The markings of the Friesland, however, more nearly resemble those of the British Hamburg than does the Campine in that these are finer and more delicate. It is of interest to note that there has existed in Holland for a considerable time a rose-combed Friesland fowl, called Hollander. Probably some of these were imported into Britain, and either laid the foundation of Pencilled Hamburg, or were incorporated into a race of the same type, though it is true that many of the ‘Dutch Every-day Layers’ had single combs when brought over to Britain. The Friesland is not built on so fine lines as the Hamburg or is so perfect in markings. It is, however, hardier. Both breeds lay small eggs and are very prolific.

**Economic Qualities.**—These birds are specially noted for egg production. Hence the German name ‘Todtleger’ and the English term already noted. Their eggs are small. They very seldom evince any sign of broodiness, and when that is the case are easily broken off. They are very lively, thriving best when given full liberty, are excellent foragers, and need but little additional food to what they pick up except in winter. Like the Hamburgs they can fly over a lofty fence. Whilst shy of strangers, they are tame with those who attend to them. Hardy in constitution, they appear able to withstand all weathers. It is by no means uncommon for them to roost in the trees during the greater part of the year. They are mediocre as table fowls, except when very young.

**Description.**—The Friesland fowl is similar in shape to the Hamburg and the Campine, a little larger in size; the hackles are abundant, and the cock has large sickles in the tail; head neat, surmounted by single comb, standing upright in both sexes, rather large, reaching from the beak to the back of the head, with shallow serrations. In the Hollanders the comb is rose; wattles slender and fairly long;



earlobes small and pure white ; eyes large, dark brown ; beak light horn colour, or blue with white tip ; body short and round ; legs fine, clean, slate in colour ; four toes on each foot. Weight : males about  $5\frac{1}{2}$  lbs. ; females,  $4\frac{1}{2}$  lbs.

**Varieties.**—As in Hamburgs, Campines and Braekels, the Gold-Pencilled and Silver-Pencilled are the leading varieties, descriptions of which are applicable to the Friesland in these two colours.

**Yellow-Pencilled.**—Respecting this variety M. Houwink says (6) that, ‘ besides the Gold-pencilled and the Silver-pencilled there is a Yellow-pencilled variety, which is a cross between the two. They are of a dull lemon colour. Much patience is required to secure colours thoroughly blended. Sometimes specimens are seen of a deeper yellow, which are obtained by crossing White upon Gold-pencilled. In the above cross the black becomes white, whilst the gold ground colour becomes a trifle lighter.’

Whites and Blacks are uniformly self-coloured, whilst the Cuckoos are pencilled black on a light-grey ground.

In what are called the Hollander fowls the same description will apply, except in respect to the comb. The varieties are identical, save that in these are found two other colours, namely Gold-laced and Silver-laced.

## DRENTE.

Nomenclature : *English, French*, Drente ; *Dutch*, Drentsche ; *German*, Drentsche.

Varieties : Gold-laced, Silver-laced, Gold-pencilled, Silver-pencilled, Black. Speckled, Partridge, Cuckoo, Blue, Yellow, Black, White.

Classification : General Purpose.

Colour of Flesh and Skin : Greyish-white.

Colour of Legs and Feet : Slate.

Colour of Egg-shells : White.

**Origin and History.**—M. Houwink says (6) : ‘ the Drentsche fowl appears to have been left alone, and remains, therefore, the nearest to the original type, the *G. Bankiva*, which, according to Darwin, is the progenitor of all classes of fowls, the varieties found in the various countries being due chiefly to selection and crossing. That they are certainly an old race is proved by a piece of needlework made in 1805 by a girl, then eighteen years of age, in which it appears exactly the same as now. As the Dutch peasants are well known to







DUTCH BARNEVELDER COCK AND HEN.

From original water-colour drawing by Mr. C. Th. van Gink, Voorburg, Holland.  
(By courtesy of "The Poultry World.")

adhere to anything that they know to be good, it speaks well for the utility of this breed that they are still frequently found in that Drente part of Holland.'

**Economic Qualities.**—The same writer says (6) that 'these fowls are accustomed to the poor and meagre land of Drente, and make the best of it. Considering the size of body, the Drente fowl makes a fine bird for the table, as well as a good layer, although it cannot compare in that respect with the Breda, which is of a bigger build. For ordinary purposes they are valuable as they are quite able to pick up their living and require very little attention.' They are hardy, good layers of fair-sized eggs, white in colour, good flesh producers, thrive equally in confinement and at liberty, and make good sitters.

**Description.**—The Drente is a long-bodied fowl, fairly long in neck and legs; head small, surmounted by a large single comb, well serrated; eyes orange in colour; beak light horn; wattles long and slender; earlobe white, almond shaped; legs strong, clean, four toes, slate-grey in colour; the males have fair-sized sickles carried well up. Weights: males,  $5\frac{1}{2}$  lbs.; females,  $4\frac{1}{2}$  lbs.

**Varieties.**—As these are very uncertain and not clearly defined, detailed description is scarcely possible.

### BARNEVELDER.\*

Nomenclature: *Dutch*, Barneveld; *English*, Barnevelder.

Varieties: Double-laced, Partridge, Black.

Classification: General Purpose, mainly egg production.

Colour of Flesh and Skin: Yellow.

Colour of Legs and Feet: Yellow.

Colour of Egg-shells: Dark Brown.

The Barnevelder is an example of breed evolution under more or less natural influences, with the object of production for market without regard to fixity of external characters. That was also the case with the Rhode Island Red in America. Those responsible for laying the basis of the Barnevelder did not regard colour of plumage or head points, were not concerned as to type, except in so far as these were indicative of economic qualities. Not until this breed was taken up by exhibitors was any determined attempt made to standardise or to popularise it as a distinctive breed. To accomplish such purpose is the function of breeders of standard poultry, in which respect they render great

\* Plates XXIX and XXX.



service, so long as they do not sacrifice productive qualities for development of abnormalities.

**Origin.**—This can be stated with a large degree of certitude. The name is derived from the small town of Barneveld, in Gelderland, Holland, which has been for long the centre of one of the most important egg-producing districts of the country. The primary object of those responsible was to secure large sized, deep brown-shelled eggs, and hens which were hardy, vigorous and able to supply eggs commanding a premium on the British markets. To accomplish that purpose it was recognised that the Asiatic breeds, notably the Langshan, Brahma and Cochin embodied the required qualities. These races in varying proportions were crossed with the lighter-bodied common fowl of Central Holland. We have not been able to obtain details as to the proportions of the breeds named. As a rule producers purchased birds of these breeds somewhat indiscriminately, mating them with hens selected by reason of their large, rich and deep coloured eggs, as well as productivity and vigour of constitution. The result proved satisfactory. The quality of eggs obtained from birds of these various crosses stimulated demand for them. As a consequence prices advanced, especially as winter laying was increased. Not until the stage named had been reached was any measure of attention paid to racial characters, thus reversing what has been the general practice.

**History.**—Our first acquaintance with this fowl was in 1913 and 1914, during visits paid to the Netherlands. By that time efforts had been made on the part of a few breeders to select defined types. Generally, however, the birds seen were very mixed in so far as coloration of plumage was concerned. White, Black, Brown, Laced and Buff chickens were in evidence. Some had single, others rose combs. Feathered legs, as might be expected from the Asiatic influences, were common, although much was being done to eliminate these. The main fact, apart from the eggs as already indicated, was the fairly uniform type. The best birds we then saw were what are called Partridge, that is, following the Jungle fowl, the Black-red Game and the Brown Leghorn in coloration of plumage. It would appear that the Partridge Cochin had been extensively used, though we have no evidence in proof.





BARNEVELDER COCK (ENGLISH)

(Bred by Lady Bromley Wilson, Nabwood, Windermere)  
First Prize, Cup and Bronze Medal, Club Show; Medal, Dairy Show and  
other prizes



Subsequent to the years named Dutch breeders have devoted attention to perfecting the Barnevelder fowl. Following the Great War progress became more rapid. Attention was concentrated chiefly upon the Laced-hen variety, which afforded the greater opportunity for exercise of their skill. The Dutch Barnevelder Club recognises alone the double-laced hen for exhibition. The Partridge may, however, be entered in utility classes. Blacks are not accepted, and breeders of that variety, which may ultimately become the most popular of all, have formed a separate Club.

The first importation of Barnevelders into Britain was made in 1920. Soon the breed was taken up by a number of enthusiastic breeders. The British Barnevelder Club was formed in 1922. The following year the Poultry Club accepted its standard. From that time onwards the breed has made remarkable progress, and classes at exhibitions been well supported. In addition hens of this breed have proved themselves at Laying Trials, both as to number and size of eggs. In the Harper Adams Trials of 1925-26 one pen of six birds gave an average of 202 eggs in forty-eight weeks, 97.4 per cent of which were of first grade. One hen laid in the time named 240 eggs, of which only two were of second grade.

**Economic Qualities.**—As indicated above the chief quality of this breed is in the size of egg and colour of shell, making the 'Dutch browns' high in favour. The shells are strong and, as a consequence, the eggs carry well. Evaporation is slow. These eggs weigh about 26 oz. per dozen. The hens are very hardy, and excellent as winter layers. They are reliable sitters and mothers. The flesh and skin are yellow, so that they do not hold a high position as table fowl. The meat is well distributed, although somewhat heavy on the thighs, and is good in flavour.

**Description.**—As already indicated the Dutch Barneveld Club only recognise the Double-laced variety for exhibition. The British Club gives recognition to that and the Partridge also. It has not included the Blacks, as a consequence of which a separate Club has been formed for that variety in Britain as well as in Holland. With respect to the Double-laced and Partridge varieties only the hens are distinctly standardised, the males being the same. That is also the case with the Game fowl in which the coloration of hens from the same

flock varies considerably. There is in this respect a serious factor, namely, that as the colour of hens cannot be restricted to these two colours, breeders may adopt double mating which would be a hindrance to greater popularity. Even if such method were adopted for exhibition or ornamental stock, it is undesirable for a productive breed. Ordinary poultry-keepers will not adopt it.

The Barnevelder has an upright carriage, with a well-balanced, compact body, and is alert in action. It is deep in body, of medium length, with a full breast, covered with fairly tight plumage; the head is lofty, beak short, eyes prominent and bright; comb of medium size, single, evenly serrated and carried well back; wattles medium; earlobes long; neck and legs of medium length; wings short, carried close to the body; legs clean and four toes on each foot. Weight: males 7 to 8 lbs.,; females, 5 to 7 lbs.

**Varieties.**—At the present time the standards for males of both the Double-laced and Partridge varieties are the same. That, however, is not likely to continue as the two varieties attain distinctiveness, if the different standards for females are maintained. The male coloration as at present adopted is as follows: breast, abdomen and tail, black; neck hackle black, ending in red and with red stem, and a broad black tip; back, red-brown with wide black lacing; wings, coverts red-brown and broad black lacing, flights and coverts black, the outer edges red-brown, showing when closed a red-brown bar; wing-bow black with red centre; beak yellow to dark; face and lobes red; eyes orange.

**Laced Hen.**—Neck and abdomen black; breast black, broadly laced with red-brown; saddle and back double laced with black edging; wings, mainly black edged with brown, forming wing bar; tail black and red-brown coverts.

**Partridge Hen.**—Neck and tail black peppered with brown; breast, back and saddle, broadly laced with black on red-brown ground, and with narrow brown shaft, as in the wings.

**Black.**—Self-coloured.

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CHAPTER VIII  
GERMAN RACES OF FOWLS.





## CHAPTER VIII

### GERMAN RACES OF FOWLS.

|                   |                      |
|-------------------|----------------------|
| LAKENFELDER.      | MOEVEN.              |
| RAMELSLOH.        | BEARDED THURINGIANS. |
| SCHLOTTERKAMM.    | CREEPER.             |
| BERGISCHE CROWER. | AUGSBURG.            |

The number of races of fowls which have originated in the countries comprising Germany is comparatively few. Such as have been traced are much of the same type. The greater number of fowls met with are either of imported races, or have been modified from these. This paucity may be attributed to the uniform conditions prevailing over a large portion of the country. It may also be due to the fact that fowls have not entered into the food supplies of Germany to the same extent as in many other lands. Following upon the rapidly advancing industrial and commercial developments from 1871 to the outbreak of the Great War in 1914, there was a great increase in consumption of eggs and poultry, a very large proportion of which were imported, eggs from Russia, Hungary, Roumania, the Balkan States and Italy, poultry from Belgium and Hungary, and geese from Russia. The Germans have not devoted much attention to stock-raising, with exception of geese, that is, for food production. For a long period, however, there had been a considerable breeding of fancy fowls, and exhibitions had become very popular. Some of the most remarkable races of Bantams had originated in Germany, as will be seen later. But for the Great War, demand would have led as elsewhere to adoption of commercial methods, as a great change was to be noted. That will doubtless be more marked in the future. Germans deserve credit for recognition of the deficiencies of their fowls for egg and flesh production, and they have availed themselves of breeds which had been

developed in other countries. We have thus another instance of the important part which Poultry Exhibitions play in the process of development, in that these give an opportunity for exercise of skill, and afford a sphere for those who may undertake the work of food supplies in any country. Farmers are slow in taking up this branch on progressive lines, looking upon poultry as a side line.

### LAKENFELDER.

Nomenclature: *Dutch*, Lakenfeller; in all other countries, Lakenfelder.

Variety: One.

Classification: Exhibition, Non-sitting.

Colour of Flesh and Skin: White.

Colour of Legs and Feet: Slate-blue.

Colour of Egg-shells: White.

**Origin.**—There is great conflict of evidence, or of suggestion, as to the origin of this race of fowls. Statements have been made without any justification that they came from Jerusalem, and specimens have been exhibited under the name ‘Lakenfelders de Jerusalem.’ They are of western origin. So far as we have been able to discover, they originated in Western Hanover, and appear to owe much to Campine influence. With what other race these were crossed we have been unable to trace. The name is thus explained (7) ‘It is said that the breed took its name from the appearance of the plumage, resembling white linen (*laken*) spread over a black field (*feld*).’ The name Lakenfelder is plural as well as singular.

**History.**—The first mention of the breed noted was in the mid-years of last century. ‘According to reliable authorities it existed (in Westphalia or Western Hanover) as early as 1835, and was then exhibited by Mr. Wirz, a collector of customs at Haldem. It originated most probably from the Campine, a breed kept largely in the same district, which was bred with dark tail, and, frequently, also, with very dark hackles. At present many splendid birds are bred in Ost-Friesland (East Friesland, Germany). The Lakenfelder was very popular about fifty years ago, but the introduction of foreign breeds destroyed its popularity, and it almost became extinct. Fortunately, it has been rescued from oblivion.’ (1) Our first acquaintance with the Lakenfelder was at the international Poultry Exhibition, held at St. Petersburg (Leningrad), Russia, in 1899. The first specimens were



imported into Britain in 1901. It has never attained any measure of popularity either in Britain or America.

**Economic Qualities.**—The Lakenfelder is built as a layer, in which quality it holds a good position, though not equal to the Campine, Hamburg or Minorca, so far as number of eggs laid are concerned. We have not seen any records exceeding 150 eggs per annum. The eggs are of an excellent size, and are pure white in shell. It is not in any sense a table fowl, though, like all the lighter-bodied varieties, it is good as a milk chicken, due to its rapid growth. When older the flesh is relatively scanty and fibrous in nature. Generally speaking it is a non-sitter. The birds are very hardy, active, good foragers, small eaters and of a wild disposition. They are most suited to full liberty rather than confinement.

**Description.**—This breed is small in body, which is narrow in front, with rather long back, deep and broad behind, as is the case with birds well developed in the region of the egg organs, both as to breadth and depth. The body is carried almost horizontally. Neck of medium length, with a small head, surmounted by a good-sized single comb, upright in both sexes, but larger in the male; wattles small; earlobe, almond in shape and white in colour; thighs short and strong; legs, which are slate-blue, are of medium length, with four toes on each foot; wings small and carried high; the tail of male is fully furnished with sickles. The special feature of this race is the colouration of the plumage, differing from that of any other fowl with which we are acquainted. The following description appeared in *Geflügel Zeitung*, and is given from a translation (1); ‘The plumage is pure white, with black tail and neck hackle. Thus apparelled the breed is of striking appearance, but it must by no means be assumed that perfect colouring is easily attainable, considering that black should be strictly confined to certain parts only. Cocks, in particular, are apt to show black markings in the centre of the saddle feathers, and if the neck is sound black right up to the nape this defect is passed over, whilst, if accompanied by white in neck hackle it must certainly be condemned.

‘If we wish to preserve the black pure in neck and tail we must look to under-colour, which should be greyish rather than white, for the whiter it is the more will it tend to expel black from the plumage. Rather permit (in breeding) the greyish under-colour to slightly pene-



trate to the surface plumage, provided there is not too much black showing on the back, than the appearance of white in tail or neck hackle. Some breeders consider white edging of the cock's sickles typical; in our opinion, however, this counteracts the proper breeding tendency, which should aim at black tail without any white.' In breeding it is found that the saddle-hackle is generally lighter than the neck-hackle and the tail; but often the ends of the saddle-hackle are tipped with black.

### RAMELSLOH.\*

Nomenclature: In all countries, Ramelsloh or Ramelsloher.

Varieties: White, Black, Speckled.

Classification: Egg-production.

Colour of Flesh and Skin: White.

Colour of Legs and Feet: Slate.

Colour of Egg-shells: White.

**Origin.**—We first saw this breed at the St. Petersburg (Lenin-grad) Exhibition of 1899. About the origin of this, the premier utility fowl of Germany, there is a considerable degree of uncertainty. M. Vander Snickt claimed (2) it as a White Braekel, for which the only point we can find in support is the colour of the legs and feet, as the shape is much more upright than that of the Braekel, and the general carriage follows very closely the Italian or Leghorn. It cannot be questioned that at one time there must have been a steady stream of Italian fowls into Germany. During the later years of the nineteenth and early in the present century British breeds were largely imported into Germany. Before that period what may be regarded as the native German breeds had not received careful attention. With exception of the legs, feet and beak, the Ramelsloh are distinctly of the Italian type. In Italy, as we have already seen, yellow flesh and legs are by no means universal. We have seen in that country many with slate-blue legs and whitish skin.

**History.**—The Ramelsloh received very little attention in its native country until recent decades, due to the fact that poultry breeding was in the primitive stage. An account was given in a German book published in 1886 (3) accompanied by an illustration, since which time it has attained a fair amount of popularity, due to its economic qualities. It has not secured an important place elsewhere, and for

\* Plate XXXI.





WHITE RAMELSLOH COCK AND HEN  
(After Kramer)



SCHLOTTERKAMM FOWLS  
(After Kramer)



exhibition has not met with the same amount of favour as have British and American breeds.

**Economic Qualities.**—Although it cannot be termed a non-sitter, Ramelsloh hens are prolific layers of good-sized, white-shelled eggs. The chickens grow rapidly, and are valuable for milk-chickens or broilers, the flesh becoming harder when beyond that stage. They are light in bone, active and very hardy, excellent foragers, and specially suited for farmers.

**Description.**—The Ramelsloh follows very closely the Italian type. The body is slight, with back sloping to the tail, and well developed in the posterior region; the tail is carried high; neck long and slight, the head small, and surmounted by a medium-sized single comb, upright in the male, falling over in the hen, and well serrated; wattles long; face red, above which are two lines of feathers, looking like heavy eyelashes; eyes dark red; beak pale blue or slate; earlobes bluish-white; legs medium in length, giving the body a compact appearance, and, with the feet and toes, of which latter there are four on each foot, slate-coloured; the males have a well-furnished tail. Weight: males, 5 to 6½ lbs.; females, 4½ to 5½ lbs. The plumage is bluish-white, often with traces of straw-colour, a characteristic of Italian fowls.

**Varieties.**—The Whites are most popular. Blacks are not common, but are very effective. The Speckled are often met with on farms where selection is neglected, thus following a protective provision of Mother Nature.

### SCHLOTTERKAMM.\*

Nomenclature: *German*, Schlotterkamm; *French*, Elberfeld; *Dutch*, or *Flemish*, Schlotterkamm.

Varieties: Mottled, Black, Cuckoo.

Classification: Egg-production.

Colour of Flesh and Skin: White.

Colour of Legs and Feet: Dark blue.

Colour of Egg-shells: White.

**Origin.**—We have not been able to obtain any definite information as to the formation of this and cognate German races of fowls. From the fact that they are chiefly found in Western Germany, on the Lower Rhine, and towards the Dutch frontier, we may, from their shape and

\* Plate XXXI.

general characters, assume their descent either from the Italian or Netherlands breeds.

**History.**—The name means ‘loose or flabby comb,’ as that decoration is large, somewhat coarse, falling over in the hen. The breed is widely distributed, but was formerly not regarded as a pure race. From the description it is very similar to the Elberfeld fowl described in some French books, which suggestion is supported by the fact that Kramer (4) does not mention the last-named breed in his work.

**Economic Qualities.**—This is stated to be the best layer of all the German races of fowls, the eggs of which are large in size and white in shell ; the flesh is delicate, yet not very abundant. It is stated to be hardy, active, the chickens grow quickly and are very precocious.

**Description.**—The body is long, carried well in front, and is somewhat shallow ; back slopes a little to the tail ; breast broad and full ; neck of medium length, carried well up, with full hackle ; head long and strong ; comb single, large, long from back to front, well set on, arched behind, deeply serrated ; face dark red and clean ; eyes large and chestnut red ; earlobes long, rounded and white ; beak horn coloured, long and slightly curved ; wings long, carried close to body ; tail in the cock full, broad and with long sickles ; legs strong and clean, rather short, light-blue in colour ; toes four, with sharp, flesh-coloured nails. Weight : males, 5 to 6 lbs. ; females,  $4\frac{1}{2}$  to 5 lbs. In general appearance the birds are light, active and well-developed behind.

**Varieties—mottled.**—The ground colour of the male is black, evenly mottled with silver-grey ; the primaries and secondaries of the wings are silver-grey, with a spotted wing-bar and a darker grey wing-bow ; the hackles are of silver-grey with a narrow black stripe, and the tail is black. In the hen the body colour follows the male, except the underparts which are black, and the neck is darker.

**Black.**—In both sexes the plumage is metallic black, without any spots or markings.

**Cuckoo.**—The ground colour of the plumage is of a light-grey, each feather diagonally marked with dark grey bars. It is assumed that both the Black and the Cuckoo have been obtained from the Mottled.



## BERGISCHE CROWER.\*

Nomenclature : *German*, Bergische Krüher ; *French*, Chanteur de Berg ;  
*Dutch*, Bergkrüher.

Variety : One.

Classification : Egg-production.

Colour of Flesh and Skin : White.

Colour of Legs and Feet : Blue-grey.

Colour of Egg-shells : White.

**Origin.**—Although separate designation is given to this race, evidence is to the effect that it is closely allied with the Schlotterkamm, and might be regarded as a variety of that breed. Such was the opinion of the late M. Louis Vander Snickt. The appearance of the two races justify that view.

**History.**—The name is derived from the fact that it is bred for competing in crowing matches, and that the voice of the male has a clearness which is more common in mountainous districts than on the plains. It is chiefly bred in the hill districts of Rhenish Prussia, by reason of its sportive qualities.

**Economic Qualities.**—It is, however, a very good layer of large-sized, white-shelled eggs ; the flesh upon the body, whilst not very abundant, is good in quality and fine in texture, having a clear white skin ; the chickens are precocious and quick in growth, and are stated to be easily reared ; the fowl is hardy if kept under natural conditions. Chiefly bred for crowing competitions in Western Germany and Belgium the males are capable of remarkably prolonged crowing.

**Description.**—In shape of body it nearly resembles the Schlotterkamm, with great length, upright carriage and elegant appearance ; breast well rounded and carried high ; back long, broad, a little arched, sloping more sharply to the tail, which is carried rather low, and with fine sickles in the male ; neck of medium length, carried forward, covered with rich coloured hackle, rather scanty ; head long, broad at back ; beak long, strong at the base, well curved, of a light horn colour ; face bright red ; eyes large, red brown ; comb single, small, carried over the beak and neck, not very deeply serrated ; wattles small and well rounded ; earlobes medium size, almond-shape, smooth and pure white ; wings long, carried tightly ; thighs stout and very short ; shanks medium, stout in bone, clean and blue-grey in

\* Plate XXXII.



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colour ; toes four in number, long and strong, with sharp nails. Weight: males, 4 to 5 lbs. ; females,  $3\frac{1}{2}$  to  $4\frac{1}{2}$  lbs. The ground colour of the male is black, spotted on breast and underparts with rich golden bay ; tail black with bright green reflections ; the head, neck-hackle, saddle-hackle and wing-bow, rich reddish-brown, except that the neck-hackle has black spots ; the back and outer wing feathers are lighter brown, and on each wing are two greenish-black bars. The hens are dark in body colour, with golden-bay markings, except the wings, which are the same as in the cock so far as primaries, secondaries and bars are concerned.

### MOEVEN.

Nomenclature : *German*, Ostfriesische Möven ; *French*, Frise-Oriental.

Varieties : Gold, Silver.

Classification : Non-sitting.

Colour of Flesh and Skin : White.

Colour of Legs and Feet : Slate-blue.

Colour of Egg-shells : White.

**Origin.**—This race evidently owns the same ancestry as the Braekel and Campine, but being bred in the districts adjacent to the borders of Belgium and Holland, it has been given separate classification. It apparently stands between the two races named, and is not so fine as the Campine, or so large as the Braekel.

**History** as to the Moeven is silent. All evidence attainable is that it has dominated the districts named for a long period, only receiving attention from breeders within recent years.

**Economic Qualities.**—Exceedingly prolific layers of somewhat small eggs, in which respect it has not been improved as have the related races. It is hardy, very active and precocious.

**Description.**—Body small, short, prominent in breast ; back broad, well sloping to the tail ; neck medium in length and carried high, abundantly covered with hackle ; head medium in size, round and narrow ; beak short, slightly curved, flesh-coloured ; comb small, single, well serrated, and long ; face red and clean ; eyes, large, dark brown ; wattles almost round, of medium size ; earlobes small, obliquely round, pure white ; wings long, carried close to body ; tail carried well back, full sickles in cock ; thighs short, legs medium





BERGISCHE CROWER FOWLS  
(After Kramer)



SILVER BEARDED THURINGIAN FOWLS  
(After Kramer)



in length, clean, fine in bone, slate-blue in colour; toes four, fine, short. Weight: males, 4 to 5 lbs.; females,  $3\frac{1}{2}$  to  $4\frac{1}{2}$  lbs.

**Varieties—Gold.**—In the cock, the breast, underparts, back, wings and thighs, golden bay, except that the outer feathers of wings are edged with black, and there is a narrow wing-bar; tail black, with metallic green reflections. The hen has a golden bay neck hackle and pale breast, the rest of the body being golden bay pencilled with black.

**Silver.**—The ground colour is silver-white in both sexes, marked with black, as in the golden variety.

### BEARDED THURINGIAN.\*

Nomenclature: *German*, Thüringer Pausbäckchen; *English*, Bearded Thuringian; *French*, Barbue de Thuringe; *Dutch*, Thüringer Baardhoen; *Spanish*, Turingias Barbadas.

Varieties: Gold, Silver, Black, White, Blue, Yellow, Chamois, Cuckoo.

Classification: Exhibition, Egg-production.

Colour of Flesh and Skin: White.

Colour of Legs and Feet: Slate-blue.

Colour of Egg-shells: White.

**Origin.**—Upon this question very little evidence is available—none, in fact, of a direct nature. A suggestion has been made that it has descended from the Owl-bearded Dutch, from the fact that, as already indicated, some of the characters in the two races, more especially the head and beard, are similar. The name indicates that it is bred in the district of Thuringia, in Central Germany. There is no evidence that, under ordinary conditions, races of fowls passed from north to south. Except in recent days the trend has always been from east to west and south to north. Bearded fowls are common in Russia and Eastern Europe. Our suggestion is that birds of this type originally were obtained from the east, and that these were carried to mid-Germany and there were regarded with favour. Such, however, is a matter of pure conjecture, for bearded races are found in many countries. Thus it is impossible, in the absence of direct evidence, to state the origin of this breed. Possibly the Owl-bearded Dutch is not descended from the Bearded Thuringian, but is due to a distinct importation from the east.

**History.**—The number of varieties would indicate that it has been

\* Plate XXXII.

bred with attention to selection for a considerable period of time. That the racial characters are fixed is evident. They have been bred chiefly for their economic qualities. Since the growing attention to poultry breeding for exhibition in Germany which began in the latter half of last century careful selection has been made. Prior to the War of 1914-1918 they were great favourites, and were described as 'the pets of German fanciers.' They certainly warrant the attention of breeders. We have never, however, seen them out of Germany.

**Economic Qualities.**—In all the German races with which we are acquainted, except the ornamental breeds, egg-production is the chief quality. There does not appear to be a native breed in the Fatherland which is valuable for meat qualities. Our observations have extended from the extreme north to the south, and from east to west, and, except such as were imported, for instance, the Malines, chickens and fowls offered for sale were mediocre in flesh qualities. These birds are very hardy and excellent foragers. The hens are fair to good as layers; the eggs are small, and pure white in colour of shell.

**Description.**—Of medium size, upright in carriage, light and active, with a compact form; body of medium length, with full, well-rounded breast, and good posterior development; neck shortish, arched, and carried backwards, well covered with hackle; head small, skull round; comb single, small, short, fine in texture, round behind, and with short spikes; wattles very small, partially hidden by the beard; eyes full, light in colour, pupil edged with reddish-brown; beak short, strong at the base, slightly curved, horn coloured; beard full from back of head and under the beak, covering the lower part of the face, the head being embedded in it; earlobes red or bluish-white, well hidden by the beard; wings medium in size and carried well up; back short and broad; tail in the male very full and broad, with long sickles carried low, and abundance of saddle-hackle; thighs short and close feathered; legs of medium length, clean, slate-blue; toes four in number, fine and well spread, whitish toe-nails; generally speaking the plumage is tight. Weight: males, 5 to 6 lbs.; females, 4 to 5 lbs.

**Varieties.**—An interesting inquiry is as to the reason why so many German races of fowls are spotted or spangled in plumage. In the absence of complete evidence it may be assumed that in a coun-



try where enemies of fowls abounded in former times the protective influence of such coloration gave prominence to races so characterised.

**Gold.**—In the male hackles, back and wings are of a rich golden red, with two black bars on the wings; breast and sides of abdomen are chestnut, each feather having a black point or spangle; beard, front of neck, and tail, are black with a bright green sheen. The hen, excepting the beard, which is black, has a ground colour of golden brown, each feather tipped with black.

**Silver.**—The entire plumage is silver-white, with black spangles as in the Gold.

**Black.**—The plumage has a metallic green-black lustre, and the beak and legs are somewhat darker than in the Gold and Silver varieties.

**White.**—Pure white plumage and beard, shanks pale slate, inclined to flesh colour.

**Blue.**—Ground colour steel blue, with hackles of a lustrous blue-black in the cock, and black beard, tail dark blue; hen light slate-blue.

**Yellow.**—Self-coloured in both sexes, with light beard of the same colour.

**Chamois.**—The ground colour is light buff, spotted on body with black, as in the Gold and Silver, and white edging.

**Cuckoo.**—Pale, greyish-blue, barred dark blue on each feather except beard and tail in male which are black.

This race presents many features of considerable interest to breeders, varying considerably from any breed met with in other countries.

## GERMAN CREEPER.

Nomenclature: *German*, Krüper; *English*, Creeper; *French*, Courtes

Pattes; *Flemish*, Kryper; *Dutch*, Kruyper, or Bolsstaart.

Varieties: Several.

Classification: General Purpose.

Colour of Flesh and Skin: White.

Colour of Legs and Feet: Slate-blue.

Colour of Egg-shells: White.

**Origin.**—Short-legged breeds of fowls are met with in various countries. Why and how this peculiar feature has been perpetuated



is difficult to trace. We are inclined to the opinion that shortness of leg is a natural variation which has been fixed by selection, and that probably it has been mainly fixed in the Low Countries and France by reason of their tameness.

**History.**—Comparatively few of these birds are bred, and chiefly for their rarity by amateurs or exhibitors.

**Economic Qualities.**—The hens are excellent layers of large, white-shelled eggs, and in flesh qualities they are regarded as superior, fattening well. They are very tame, and specially suited to be kept as pets in gardens. They are not very vigorous, easily taking cold, for which reason it is undesirable to permit them access to long and damp grass.

**Description.**—In body the Krüper is very long and cylindrical, almost duck-like, owing to the shortness of legs; the back is long and somewhat sunken; neck short, rounded, carried well forward; head medium in size, somewhat elongated; beak strong, slightly curved, dark horn colour; eyes dark red, with black pupil; comb single, medium in size, long, well serrated; earlobes perfectly round, small, white; wings long and broad; tail fully developed, broad, ornamented in the male with broad but slightly curved sickles; thighs very short and strong, as are the shanks, which are clean and slate-blue in colour; toes four, well spread, whitish toe nails.

**Varieties.**—Of these there are several, namely, Black, White, Partridge and Cuckoo. The best known are the Blacks, which have a metallic green sheen.

#### REFERENCES.

- (1) *Poultry* (London, 1902).
- (2) *Chasse et Pêche* (Brussels, 1899).
- (3) *Die Geflügelzucht*, by Bruno Durigen (Berlin, 1886).
- (4) *Taschenbuch der Rassegeflügelsucht*, by Von Rudolph Kramer (Wurzburg, 1899).

CHAPTER IX  
OTHER EUROPEAN RACES OF FOWLS.





## CHAPTER IX

### OTHER EUROPEAN RACES OF FOWLS.

POLISH, OR PADOUE.

RUSSIAN RACES :

ORLOFF.

PAVLOFF.

RUSSIAN-DUTCH.

SIBERIAN FEATHER-FOOTED.

USHANKI.

RUSSIAN RACES (CONTINUED).

RUSSIAN CRESTED.

RUSSIAN ROSE-COMB.

MAGYAR (HUNGARIAN).

TRANSYLVANIAN NAKED NECK.

DANISH LANDHEN.

POLISH GREENFOOT.

Before dealing with British and American races of fowls it will be convenient to describe European breeds which have a limited dissemination. These are of interest as indicative of the evolutionary process, and of differing ideals, even though they do not appear to offer any sign of superiority to or even of equality with breeds which have attained general or national popularity.

### POLISH, OR PADOUE.

Nomenclature : *English*, Polish ; *French*, Padoue ; *German*, Paduaner ; *Dutch*, Padua ; *Danish*, Paduanere ; *Italian*, Padovana ; *Spanish*, Padua ; *Hungarian*, Paduai.

Varieties : Gold, Silver, White Chamois, Buff.

Classification : Exhibition, Non-sitting.

Colour of Flesh and Skin ; Greyish-white.

Colour of Legs and Feet : Slate-blue.

Colour of Egg-shells : White.

In Anglo-Saxon countries generally a name has been given to this race of fowls which is, to say the least, misleading. How it came to be applied is explained below. Until a visit was paid to Russia it was regarded as of Western or Southern European extraction. This opinion had to be modified. It may be that in the eighteenth or the

early part of the nineteenth century, specimens were imported from Eastern Europe, and that those arriving in Britain were stated to be from Poland, and hence the name Polish was adopted. In Moubray's work (1815) the Crested Dutch were called 'Poland fowls.' In Dickson's book, issued in 1838, the term Paduan-Polish was applied to all the large-crested varieties. When Wingfield and Johnson's 'Poultry Book' was issued in 1853, the name Polish was adopted alone, and has so continued. It has been suggested that the title is derived from the crest or head covering, in some districts called a 'poll.' There anyone having a thick and heavy crop of hair, is told that he has a 'big poll.' Thus it was probable that 'Poll' was first used, then 'Polled,' afterwards 'Poland,' and finally 'Polish.' On the Continent of Europe other than Crested Dutch are named Padoue.

**Origin.**—Tracing the descent of the Polish fowl is attended by many difficulties. The great Italian naturalist Aldrovandi, of Bologna University, where is a great collection of his remarkable drawings, and who died in 1605, in one of his works described the Padua or Patavinian fowl of his day as follows: 'There are kinds of Gallinaceous birds, larger than ours, which are commonly called Patavians. . . . The cock is exceedingly beautiful, being richly decorated with five colours, viz., black, white, green, red and ochre; the body black, the neck covered with white feathers, and the wings and tail partly black and partly green; the tail is of the same hue, but the roots of the feathers are whitish, and some of the flight feathers are also white; the eyes are surrounded by red circles; the comb is very small; the bill and feet yellow; and the head is adorned with a beautiful crest. In the hen there is no white except the white pellicle at the opening of the ears; she is altogether of a greenish-black colour, with yellow feet, and a very small comb, slightly tinged with red.' This description was accompanied by illustrations of a cock and hen, reproduced in Tegetmeier's 'Poultry Book,' (1) from which the above translation is quoted. The plate shows greater affinity with modern Polish than the description. It is of interest, in view of the evidence given below from Italian sources, that Willughby (2), commenting on this description, states that Aldrovandi described a cock and hen which was really a Polverara (see Chapter 3), from a village near Padua, where they are common.



Coming to later writers, we find that Darwin (3) classifies all the races with top-knots under the term 'Crested or Polish.' He does not offer any evidence as to their origin. As sub-breeds he includes the Sultan, Ptarmigan, Ghoondook, Creve, Horned fowl, Houdan, and Guelderland, or Breda, some of which owe their crested character to Polish blood. In others it is doubtful if such be the case. French writers are very uncertain in their opinions. Some classify the Crested Dutch and the Polish as one race, though that is exceptional. M. Cornevin regards them as separate breeds. Respecting the last named he says (4): 'The origin of the Padoue is as uncertain and obscure as that of the Crested Dutch, which they much resemble. At first the origin was probably common, but some special characteristics suggest a different conclusion. There are those who regard the Padoue as a sub-race of the Dutch. If we look at these two groups there are no more reasons for making them one than two.' It is probable that several centuries ago they had a common ancestry, which fact does not determine their present relationship. In a little work by the Marquis Trevisani, who has given careful attention to Italian races of poultry, we find it stated, speaking of the Polverara (5): 'It is impossible to say whether it is the Polverara which has produced the Polish, classified by Darwin as a separate breed, or whether the Polverara is the product of the Polish.' Here a difficulty arises. At the exhibition of the Italian Poultry Society, held in Rome, 1903, were classes provided for what were called Padovana, which were really Polish or Padoue. When it is remembered that in Italian works on Poultry the Polverara are called 'Padovana Polverara,' it is evident the relationship is regarded as close. All evidence would point in the direction of an Italian parentage for the Polish, were it not for our observations in Russia, and especially as to the Pavloff fowl (see below). This is very varied in the crest formation, as the description indicates, and it is frequently seen with feathered legs. There are, however, marked resemblances to the Polish. In the absence of information as to what races of poultry exist in Central and Northern Asia no definite conclusion can be formed. Hehn, speaking of the domestic fowl says (6) that 'they may have come straight from Asia to the kindred nations of the South Russian steppes and the eastern slopes of the Carpathian mountains, whose religion agreed with that of the other



Iranian races, and some of whom already practiced agriculture in the time of Herodotus.' What appears to be a reasonable and warranted assumption is that the Polish or Padoue fowl is descended from the Polverara, which in former times was derived from the Pavloff or a kindred fowl, but that the Crested Dutch came originally from that Russian breed. No actual evidence, however, is available in either direction. As an indication that there was a stream of fowls from east to west of the type named may be mentioned that the term *Hamburgh* was given in the eighteenth century and the early part of last century to crested fowls, as shown by R. Brookes, M.D., in his '*Natural History of Birds*,' published in 1763, in which he says: 'It has a rosy comb, but that does not reach halfway on the head, the hinder part covered with dark-coloured feathers.' In Rees' '*Cyclopædia*' (1820) is a plate of so-called *Hamburgh* fowls which would pass, but for the fact that they are clean-legged, for the Pavloff we saw in Russia. Further, Mr. R. P. Brent, using the same name, says: '*Hamburghs* come from Germany, many coming from *Hamburgh*, from which circumstance they derive their name. They are tufted like the *Pole*, but the tuft is smaller, does not come so forward, and, consequently, leaves the eyes more exposed, and is fronted by a small comb of curious shape, generally consisting of a very small double comb, terminating in two sprouts or horns.' (7) In Russia is a breed called '*Russian Dutch*,' very like the '*Crested Dutch*,' and a clean-legged crested variety. Hence the indications are that the original habitat of all these breeds and varieties was Eastern Europe or Western Asia. How they passed to Italy and other countries cannot now be traced.

**History.**—What is called the *Padoue*, or *Polish*, has been bred in France for a long period of time, and is found in that country more than elsewhere. In the British Isles and America it is essentially an exhibition fowl. In Italy and Russia the races which appear to be related are kept to a considerable extent for productive qualities. It evidently has contributed largely to the formation of crested breeds in France.

**Economic Qualities.**—*Polish* hens are exceedingly good layers of large-sized, white-shelled eggs, and they very rarely sit, with exception of the *Chamois* variety, according to M. Jacque, who says (8): 'The *Chamois Padoue* presents this peculiarity that some hens are

good sitters.' It is noteworthy, however, that all Polish do not begin to lay early, which is to be expected from their susceptibility to cold, and are slow in growth of feathers, usually a sign of weak constitution. The flesh is well placed on the breast, and, although not very abundant, is excellent in quality and very fine in flavour. Chickens are somewhat difficult to rear, needing special care when casting their first down. That is more so when they are bred entirely in confinement. We have known cases where very little protection was given and the results were surprisingly successful. The birds were treated in a common-sense manner, and hardened from the outset. With adult birds coddling is resorted to in order to preserve the plumage in good condition, and they have to be provided with special water fountains to prevent the crests becoming wet. Polish are, in brief, birds of feather. There is no handsomer breed when in good form.

**Description.**—A peculiarity is to be noted in the Polish and the Crested Dutch which sharply defines them from other races, namely, a bony tuberosity on the forepart of the skull. At one time this was thought to be the result of disease. As pointed out by Tegetmeier (1) : 'The crest in both sexes arises from a globular tuber, situate on the forepart of the skull ; an intimate connection exists between the size of the swelling and that of the crest. In all cases where the swelling is not largely developed, there cannot exist a good crest. . . . The young, when first hatched, show the prominence most distinctly, each little chick running about with a head that looks as if half a marble had been thrust under the skin of the skull ; and by the size of the tuberosity, even at this early age, the birds can be selected that will have the best developed crests.'

In body the Polish is long and deep, with shoulders standing well up ; back flat and long ; breast prominent and wings large ; neck long, broad where it connects with the body and narrowing towards the head, which is of medium size and completely covered by the crest. In the male the crest is bred as large as possible, smooth and high in front, and whilst there should be no actual division or parting, the long narrow feathers of which it is composed fall all around. In the female the crest is globular, as the feathers do not hang at all. The eye is bright and full, yet is not usually seen ; earlobe which is bluish-white



is also hidden ; beak dark blue or horn-colour ; comb, if any is present, consists of two small horns. A distinctive difference between the Crested Dutch and the Polish is that the former have wattles, whilst in the latter these are absent, and the place is taken by a very full beard of muffs, extending right over the face on both sides and across the throat ; the legs are long, fine in bone and clean, and four toes on each foot ; tail is full and in the male well spread and furnished with long sickles, but not carried high. Weight : males,  $5\frac{1}{2}$  to  $6\frac{1}{2}$  lbs.; females, 4 to 5 lbs. The general appearance is that of a tall, graceful, slightly built bird, with a pleasing carriage, active and alert, and when that is the case the crest is in unison.

**Varieties.—Gold.**—The ground colour is golden bay. All the feathers on the body and tail in both sexes are laced or edged with a narrow band of deep black, excepting in the cock the back, saddle and primary feathers of the wings have black spangles at the ends ; hackles are golden bay, tipped with black ; the crest is black at the roots, golden bay in the centre, and tipped with black at the extremities ; legs and feet are dark blue.

**Silver.**—In this variety the markings are exactly the same as described for the Gold, but the ground colour is silver-white. In a good specimen this is the prettiest of all Polish.

**White.**—Not many of these are met with, although excellent specimens are often seen at Continental exhibitions. The effect is very pleasing, as the whole of the plumage is of a bluish-white.

**Chamois.**—In this variety the ground colour is buff, except that in the hens it is lighter than in the cocks. The place of the black markings in Gold and Silver is taken by silver-white, giving the appearance of white lacing and spangling. Mr. Tegetmeier explains this by saying (1) : ‘ It is a singular circumstance that when a variation of colour takes place in the plumage of birds, the change from black to white appears to be much more easily affected than from any other colour to white. Thus when black-red and white Game fowls are crossed Piles are produced, in which the black disappears, but the red of the saddle and hackle remains. By crossing a Gold-spangled and White Polish, these Spangled Buffs or Chamois Polish are produced, in which the black spangle of the golden bird is changed into the white spangle of the Buff, the ground colour remaining almost unchanged.’



**Buff.**—In this variety the entire plumage is buff, without any white or black markings.

### RUSSIAN RACES.

Knowledge as to the races of fowls met with in European Russia is very limited. Older poultry books referred to Russian or Varna fowls, respecting which direct evidence is wanting. Dickson thus refers to what he terms the Russian or Siberian fowl (9) :

‘This breed seems to differ chiefly from others in having considerable tufts of brown or dark, loose feathers springing from each jaw, and others, longer or fuller, from the lower mandible, like a Jew’s beard. In the hen there is an upright tuft, spreading out from the hind head, of the same silky texture. Independent of these the cock has the usual comb and wattles, and the hen a small comb likewise. This sort is said to have come from Moscow, and varies in colour, one variety being white, with the ends of the feathers glossy blue or black, giving it a spotted appearance, and the legs being covered with fibrous or downy feathers. Another has the plumage of the Game fowl—a fine, tawny orange, spotted with black. This sort is much esteemed in Scotland for prolific laying.’

There are several points of resemblance between the fowl described above—now unknown in Scotland—and those in Russia at the present time. In spite of the doubts expressed by writers as to the supposed origin, we are disposed to the view that they came from that country, between which and North Britain commercial relationships have been maintained for a long period. Miss Watts, referring to the Russian fowl, stated (10) that ‘at the Royal Dublin Society’s Show, April, 1846, some specimens were exhibited by Mr. Nolan. It appears that they are sometimes gold and silver spangled, resembling the Spangled Hamburgs.’ She is referring to the crested birds so designated as one period.

As to the general character of Russian poultry, we quote from an interesting report upon the races in that country, presented by M. Houdekow to the International Congress held at St. Petersburg (Lenin-grad), in May, 1899, in which he says (11) :

‘Domestic fowls of which we cannot define the breed are very

widely distributed in Russia ; they are very mixed, the result of crossing races of the most diversified character coming into the country from Europe or Asia. These birds are, as a rule, small and poor layers, their external characters without end, to the extent that it is very difficult to find in the same flock birds of the same type, having identical qualities either in appearance or economic properties. Nevertheless, we notice between them some points of resemblance, depending, without doubt, upon local conditions, soil and food. Under the influence of these factors, nearly always unfavourable to fixity of type, our domestic fowls surprise us by their wildness, coarseness of body, and fighting qualities. They are half domestic and half wild. Taking into consideration the low degree of development in which we find Russian aviculture, from the point of view of the breeder's art, it would appear difficult to find any local races well known and of an individual character. The contrary, however, is the case. There are breeds of fowls and geese well established. The origin of these breeds is unknown. They are not to be met with in the rest of Europe, or in America, or in Asia. We call them Russian, because from the most remote times they have been bred in that country, where we find them with typical qualities and characteristics.'

#### ORLOFF.

Nomenclature : In all countries, Orloff.  
 Varieties : Red, Speckled, White.  
 Classification : Table.  
 Colour of Flesh and Skin : Yellow.  
 Colour of Legs and Feet : Yellow.  
 Colour of Egg-shells : Brown.

**Origin.**—All the evidence available is that published by M. Houdekow (11) :

'The Orloff fowl has received this name by reason of the fact that it is supposed Count Orloff-Techesmansky imported the breed. That is not probable, because it was already known to Russian amateurs before his day. We have discovered a description in the work of an unknown author, published in 1774, where it is named "Chlianskaia," not Orloff, and it was known under that term much later. It is customary in our days to call the breed Orloff on the supposition that



specimens were imported by the celebrated horse-breeder, Count Orloff-Techesmansky, from Persia, and principally from the province of Ghilan. He did not give them the name. Central Asia has been explored to a very little extent in many of the different parts, and it is not improbable that there may be surprises in reserve there. This breed has a definite character, and may not have originated in Russia. The Russians have first made known to Europe the remarkable fowl Orloff.'

Structure and general type of this fowl would indicate that it is nearly allied to the Malay, though it is much more brilliant in coloration of plumage, and that it was obtained in the first place from Central Asia subsequent to the great Mongol invasion of Russia more than five centuries ago.

**History.**—Birds partaking more or less of this type are met with in mid-Russia, where they have not been bred with much care in selection. The supply of pure-bred stock is small, and was, prior to 1914, in the hands of a few breeders. We first saw the Orloff at the St. Petersburg Exhibition in 1899, where they attracted much attention by reason of their brilliantly burnished plumage, more especially in the red or mahogany variety. The exhibitors would not dispose of any of these. After much difficulty we secured a Speckled cock and two hens. Unfortunately the hens died soon after arrival, and we were unable to obtain more. At a later period others were imported, not equal, however, to those seen in Russia. British breeders, in order to improve the laying quality of the hens, crossed them with the Rhode Island Red, which has effected that object. In doing so they have largely changed the character. Those exhibited under this name are not pure, and have not the striking characteristics of such as are found in Russia. The following notes deal with the original type.

**Economic Qualities.**—It is generally acknowledged that the hens are poor layers, as indicated by the structure of the body. The breast development is considerable, the meat on which is hard, and the bone very heavy. It is slow in growth, and, like our Cornish Game, more valuable for crossing with soft-fleshed races to improve the meat qualities than when pure. It is very hardy, and able to withstand the rigours of the Russian climate, in spite of the fact that a large amount



of in-breeding has taken place to fix the type and colours. It is not an economic fowl.

**Description.**—The standard issued by the Russian Poultry Society is as follows : Head medium in size, very wide in the forehead ; beak short and curved at the base ; eye bright amber-coloured, and with prominent eyebrows ; comb like a raspberry cut lengthwise covered with small points, and carried close to the head ; wattles small in male, none in female ; beard and whiskers well developed and full, especially in the hen ; earlobes very small in cock, and not seen in hen ; neck rather long, carried proudly, and well covered with hackles, which, narrow at the base of the neck, are carried close to the body ; body short in relation to size, compact, and very wide ; back short, wide and flat ; wings moderate in size, and carried well up ; tail medium, carried erect, and in the male ornamented with narrow sickles of moderate length ; legs long and very stout, the shanks being bright yellow and clean ; toes four in number, well spread.

M. Houdekow says (11) that the best models of this race are of large size, the cocks weighing from 9 to 11 lbs., with hens about 2 lbs. less. In appearance the Orloff is a tall, powerfully-built fowl, capable of defending itself against all enemies.

**Varieties.**—Of the three named the Red is said to be most rare, and the Speckled more general.

**Red.**—These are of a dark reddish-brown, like burnished mahogany, very even in colour though the hackle is brighter than the body plumage. The effect is very striking indeed. We have not seen in any other fowl an equal brilliance of plumage, which in the best specimens shines like satin. Hens have the same coloration, not so brilliant as in the male, and with lighter tints in the centre of each feather.

**Speckled.**—These are black-red in colour, having black breasts and tails which are speckled with white, like our Spangled Game, which they resemble in plumage, except that the body colour of the hens is darker.

**White.**—The entire plumage is pure white, with great brilliancy of sheen.

## PAVLOFF.

Nomenclature : In all countries, Pavloff.

Varieties : Gold, Silver, Blue, Black.

Classification : Egg-production.

Colour of Flesh and Skin : Cream.

Colour of Legs and Feet : Slate-blue generally, in some cases yellow.

Colour of Egg-shells : White.

**Origin.**—From the description this breed would appear to be the same as the Russian, or Siberian, or Varna fowls mentioned in older Poultry books. When in Russia we saw a large number, which, however, varied greatly in their secondary characters, though evidently of the same race. The opinion held in that country is that they are closely related to the Polish, or Padoue fowl. Probably, as already indicated, the last named breed has descended from the Pavloff, though when and how we have not been able to trace. The one difficulty in accepting this conclusion is the peculiar formation of skull in the Polish, which does not appear to be present in the Pavloff. It is a well-known fact, however, that external developments lead to changes of structure of body. Breeding for excessive size of crest through long generations would doubtless result in enlargement of the skull and produce the cranial tuberosity referred to, even though that be not present in the fowls retaining the original type and with small crests.

Upon this point there is very little information, in fact, nothing at all reliable. M. Houdekow states (11) that ‘these fowls are so peculiar and have so fixed a type in their different characters as to give them the right to be regarded as a distinct race. They have received the name because they are principally bred in the district of Pavlovsk, which is in the Government (or Department) Nijni-Novgorod, where, it is said, they were introduced by the Empress Catherine II.’ Whence they were imported is not suggested. From the description of the Siberian Feather-footed fowls we should imagine that both came from Northern Asia. This race, however, is widely spread in Russia, and is met with on the old Russian-German border country, that is, the present Poland.

**History.**—With very few exceptions the breeding of poultry has not been conducted on selective lines in Russia, though in the early



years of this century much more was being done in that direction. Taking that fact into consideration it says much for the prepotency of the Pavloff that fowls with its special characters were distributed over considerable areas of the country. The tendency was for it to be displaced by imported breeds, which doubtless has been accentuated by the Great War and the subsequent revolution.

**Economic Qualities.**—The Pavloff fowl is chiefly valuable for egg-production, apart from its racial interest. It is an excellent layer even though there has been no special breeding for that quality. That it is capable of great improvement in the average annual egg yield is certain. It is chiefly, however, a spring and summer layer. The eggs are small in size, which is true of nearly all the Russian races of fowls. The chickens are quick growers, very hardy, but at no time do the birds carry much flesh.

**Description.**—The body is short and wide, with a broad, straight back; neck short, slightly arched, and well covered with hackle; head round, with prominent nostrils, and beak nearly straight, horn-coloured; eye full, almost black; the comb consists of two fine horns, carried well forward; crest good size, in cocks formed of narrow upright feathers, in hens round. There are, however, great variations in the crests. In some specimens the feathers stand upright in the cocks; in others there is a transverse line dividing the crest, part of which falls back and part forward, with well-defined division. In a third form the feathers formed a fringe in front, a few standing up behind; and a fourth has the main part of the head feathers falling back like a lady's veil; wattles only in males, and small; beard and whiskers in both sexes very thick, covering the earlobes, a large portion of the throat and face; tail in the male large, full, carried upright, and with long, broad sickles; legs short, and with the toes well feathered. Weight: males, 4 to 5 lbs.; females, 3 to 4 lbs.

**Varieties.**—There is great divergence in the Pavloff fowls, and the coloration of plumage is very variable. The varieties named below are accepted as pure, others being due to indiscriminate breeding.

**Gold.**—The ground colour is golden-bay, as in Gold Polish, with black spangles. The specimens we have seen were not evenly marked.

**Silver.**—Ground colour silver-white, with spangles as in the Gold variety.



**Blue and Black.**—Evidently sports from the above, not often seen.

### RUSSIAN-DUTCH.

Nomenclature : Russo-Hollandais.  
 Variety : One.  
 Classification : Egg-production.  
 Colour of Flesh and Skin : White.  
 Colour of Legs and Feet : White.  
 Colour of Egg-shells : White.

**Origin.**—These fowls are closely allied to the Pencilled Hamburg which were at one time called ‘Dutch everlasting-layers.’ They are stated to have been known in Russia for a very long period of time. M. Houdekow states (11) : ‘It is a very ancient race, which was already in existence at the time of Tsar Alexis Mikhailovitch (A.D. 1645-1676), from the evidence of historic documents of that period.’ He adds that ‘they are called Dutch because, without doubt, they were imported in the first instance from Holland ; nevertheless it is not difficult to see that some peculiarities have an Asiatic origin.’ In this connection must be remembered the commercial relationships by sea for centuries between Russia and the Netherlands. Other than the above no History can be given.

**Economic Qualities.**—These birds are medium in size of body, and are reported to be prolific layers. They are distinctly above the average of Russian fowls for table qualities, and are fairly covered with muscle, which is white and of good quality. No evidence is forthcoming as to their vigour, from the fact that they have been entirely in the hands of amateurs.

**Description.**—Head small, rather long ; beak long, stout, slightly curved, white with horn-coloured points ; eye red ; comb flat on top, firmly placed on the head, well covered with small points ; face smooth and red ; earlobes and wattles small and red ; neck long, carried erect, scantily feathered ; back wide at shoulders, narrowing to the tail, slightly rounded ; breast, full, prominent, round ; body stout and long ; wings medium in size, carried closely ; tail moderate in size, compact, rather inclined backward, in males fully furnished with long, narrow sickles ; legs and shanks long and stout, white in colour and free from feathers ; toes four on each foot ; plumage bright and glossy,

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in males dark-red marked with black, in hens chestnut. Weight : males, 7 lbs. ; females,  $5\frac{1}{2}$  lbs.

The above description is derived from the Standard issued by the Russian Poultry Society, as are those below, which latter races we have not seen.

### SIBERIAN FEATHER-FOOTED.

**Description.**—Head large ; beak stout and short ; eye full and red ; comb rose, small and moderately developed ; behind the comb is a small mass of feathers, which stand up well from the head, forming a rudimentary crest ; face red, bordered with bush whiskers, entirely covering the earlobes ; there is also a thick beard under the lower mandible ; wattles small in males and rudimentary in females ; neck short, stout and slightly arched, well covered with hackles ; back wide, flat and almost straight ; breast wide and full, carried fairly forward, not prominent ; wings large and powerful ; tail large, full, carried wide ; in males the tail coverts are abundant, and the sickles long and well curved ; legs of medium length, well feathered with thick, short quills right up to the thighs, from which grow hard vulture hocks ; the plumage is generally white, in some instances cuckoo. Weight : males, about 6 lbs. ; females, 4 to  $4\frac{1}{2}$  lbs.

In the above, with exception of the whiskers and beard, the type is Asiatic. If, as has been suggested, the Siberian Feather-footed fowl is of ancient lineage, it may be the progenitor of several of the modern Russian races, and also of some fowls we have found in South-eastern Europe. It is, however, impossible to arrive at a satisfactory opinion upon this question. Further exploration of Siberia and Northern Asia may reveal races of poultry as yet unknown to us, and solve problems which present many difficulties.

### USHANKI.

**Description.**—Head large, round, with broad forehead ; beak medium in length, slightly curved ; eye full, bright and red ; face red, hidden almost entirely by the beard ; comb single, well developed, evenly serrated, carried straight and erect ; earlobes very small, entirely hidden by whiskers ; wattles red in colour, small in males,



rudimentary in females ; beard and whiskers well developed, more especially in the hens, very full and bushy ; neck short, arched, carried backward ; in males the neck hackle thick, and falling well over the shoulders ; back wide, flat and straight ; breast prominent, carried forward, broad and rounded ; wings long and wide, carried somewhat low ; tail large, nicely expanded, inclined backwards, and the males have long, well curved sickles ; legs short and stout, but perfectly clear of feathers ; colour of plumage generally black, but Silvers, Reds and other colours are found ; the plumage is close and tight. Weight : males, 6 lbs. ; females, 4 lbs.

This race appears to possess distinctive characters. With the exception of the whiskers and beard it stands alone, although in some respects an affinity with the Orloff is noted. It would not be surprising to find that they emanate from the same districts as the breed just mentioned.

#### RUSSIAN CRESTED.

**Description.**—Head rather long, of conical form, with a straight beak, slightly curved at the end ; eye red ; face smooth and red ; comb small, generally single and upright, slightly serrated ; earlobes and wattles red in colour, well developed ; crest inclined backward, much fuller in the hens, consisting of long, hackle-like feathers hanging over the back of the head ; in the cocks the crest partakes of the nature of a broad ribbon ; neck short, slightly arched, inclined backwards, in the males abundantly covered with long hackles, falling over the shoulders ; back wide, flat and straight ; breast full and wide ; body long, deep and wide ; wings large, strong and carried somewhat low ; tail large, full, well spread, carried high, and in the males supplied with large and long sickles, which are well curved ; legs short, and with the feet entirely clear of feathers ; the plumage is very thick and abundant ; colours vary greatly, having no fixity. Weight : males, 5 lbs. ; females, 4 lbs.

The absence of whiskers and beard is suggestive, as these features may be accepted as indicative of racial affinity, which is also true of leg feathering when present. The peculiar crest may be due to a chance cross, a remote connection with the Pavloff. The breed is a rare one.



## RUSSIAN ROSE-COMB.

**Description.**—Head large ; beak of medium size and short ; eye red ; face clean and red ; comb square and rose-shaped, of medium size, with a pointed spike behind, the top flat and covered with small points as in the Hamburg ; neck moderate in length, thickly covered with hackle ; back wide, flat and straight ; breast broad, full in front ; body stout, wide, and of medium length ; wings large, strong, and carried rather low ; tail large, full, slightly expanded, and in the males well furnished with sickles, which are long and perfectly curved, and provided with an abundant supply of coverts ; legs short and, with the feet, entirely free from feathers. There are several varieties, some of which appear to be definitely fixed. Weight : males, 6 lbs. ; females, 4 lbs. As will be evident in head points this race has resemblances with the Hamburg. Possibly rose-combed fowls in Western Europe may have originally been derived from Russia.

## MAGYAR.

Nomenclature : *English, Hungarian, Magyar ; German, Ungarische Landhühner ; Dutch, Magyaar ; Spanish, Magiar.*

Varieties : Black, Red, Yellow, White, Speckled.

Classification : Egg-production.

Colour of Flesh and Skin : Yellow, except in Whites.

Colour of Legs and Feet : Yellow, except in Whites.

Colour of Egg-shells : White.

Political and National changes lead to distribution of territory, necessitating the adoption of other designations than those previously known. Following upon the Great War, Hungary has lost a considerable amount of territory. It is now restricted to a much smaller area. It is, however, highly diversified in its physical features. Probably at a former period there were a number of races of fowls which are now no longer seen, more especially as there were large importations of foreign breeds, both for exhibition and the improvement of economic properties, owing to the great developments of production in the early years of the present century. What may be the future of Hungarian poultry-breeding cannot be foreseen.

**Origin.**—There are no definite records as to the origin of the Magyar

fowls, which are largely bred in the great valley of, and the plains bordering, the River Danube. During our visits to that country, and from the information obtained, it would appear that it is descended from Italian or Leghorn races. The differences between the Magyar and the Italians are very small indeed, not more than what might be expected where fowls are bred for a considerable period of time under different sets of conditions, or greater than those found between Italian and British or American Leghorns. As previously mentioned political and national movements, wars of conquest and commercial intercourse, have had much to do with distribution of animals over the earth. Long centuries ago the Roman legions penetrated as far east as Hungary, and at a later period a considerable portion of Italy was subject to the Austrian throne, as was Hungary. Hence the stream of influence which can be traced from Italy to the Mediterranean and to Spain, across the Alps to Southern France and Germany, and reaching down the Rhine Valley may be found to have passed across the Styrian Alps into Austria, and by the valleys of Croatia and Slavonia, now part of Yugo-Slavia, to the land of the Magyars. These latter countries are contiguous. The interesting fact in this connection is that Hungary appears to be the limit of distribution of Italian races on that side under normal conditions. On passing the Lower Danube we find a distinct type, following the Asiatic races on the one hand, and the South Russian breeds on the other. There need be no hesitation in attributing the origin of the Magyar to Italian fowls, as they have the type which is characteristic of the latter, following them closely in economic qualities.

**History.**—Prior to the Great War there was a steady increase in the number of Magyar fowls found in Hungary. Sufficient time has not elapsed since that time to indicate whether the rebuilding of the Poultry Industry, which had been widely developed, will be on similar lines, or that imported breeds will displace the native races.

**Economic Qualities.**—The Magyar fowl is essentially an egg-producer, following upon the Leghorn, which it closely resembles. Inquiries have shown that it is prolific, often yielding 150 eggs per annum, which might be increased by selective breeding. In that respect there are considerable differences. Little efforts have been put forth to induce winter laying of the Magyar races, which are



chiefly profitable in spring and summer. The eggs are usually small, as are those of Italian fowls. The hens are not disposed to broodiness, and are unreliable, so that they may be regarded as non-sitters. The chickens are very precocious, quick in growth, and hardy, but, except when young, are mediocre in flesh qualities. The fowls are excellent foragers, finding the greater part of their food, and extremely hardy. When accustomed they will roost in the open during the winter. They are lively and alert, are small in bone, and respond to feeding; the flesh, however, is yellow in colour.

**Description.**—The Magyar follows closely the Italian, or Leghorn type, with one exception, namely, that they are less round in body so far as the White variety is concerned. The body is small, compact and broad, and the carriage upright; neck and legs are of medium length, the former well curved; head long, surmounted by a single comb, much smaller than on British and American Leghorns, varying much in shape, as in some cases it is short and carried high above the head at back, whilst in others it is low. With increase of fecundity the tendency is for the comb to become larger; earlobes, as a rule, are red, though white is not infrequent; beak short and ivory white; wings short and strong; tail carried high, especially in the male; legs strong though fine in bone; all except the Whites have yellow flesh and legs with four toes on each foot; attempts were made to breed the White and Yellow varieties with white legs and flesh, which is a mistake. Weight: males, 4 to 5 lbs.; females,  $3\frac{1}{2}$  to  $4\frac{1}{2}$  lbs.

**Varieties.**—The general type of the Magyar is fairly uniform, with, however, variations due to lack of careful selection and breeding to definite standards.

**Black.**—Self-coloured, with dark legs, in which respect they follow the Black Italians. They are stated to be good layers and very hardy. Light coloured plumage in poultry is generally preferred. The chief fault is an inclination to narrowness of body and less capacity than is desirable.

**Red.**—Practically the Brown Leghorn, except for the red earlobes. They are great favourites by reason of their prolificacy and vigorous constitution, and were formerly kept extensively.

**Yellow.**—In some cases the colour is even over all the body, whilst others have white markings like Piles, from which fact it may be



assumed they are a sport from the Browns. They have yellow flesh and red earlobes, and are similar to the Yellows which we saw in Denmark in the 'eighties of last century. Selection for white legs and flesh has not been very successful.

**White.**—In this variety the body is round and deeper than usual in Italians. It is evident a cross has been introduced with a heavier breed, as apparent from the shape, and the white legs. They are stated to be good sitters and mothers which is a further proof. The influence thus introduced is unknown. These birds are pleasing in appearance, something like small White Minorcas, rather than Leghorns.

**Speckled.**—In this variety the plumage is similar to that of the Silver-grey Dorking, except that the body is speckled with white spots. The body is larger than in other varieties of the Magyar fowl, and has a distinctive character. The legs are yellow and the earlobe red. What the cross has been to secure these modifications we have been unable to learn.

### TRANSYLVANIAN NAKED NECK.

Nomenclature: *English*, Naked Necks; *French*, Cou Nu de Transylvania; *German*, Nachthalse; *Spanish*, Cuello desnudo de Transilvania; *Hungarian*, Erdelyi Kopasz Nyaku.

Varieties: White, Coloured.

Classification: Exhibition, Egg-production.

Colour of Flesh and Skin: Greyish-white.

Colour of Legs and Feet: Leaden-grey.

Colour of Egg-shells: White.

**Origin.**—This fowl is stated to have been produced in what was formerly Eastern Hungary, now largely included in Roumania. No evidence has been obtained as to the causes which have led to its peculiar features, and which are not met with in any other breed known to us. Suggestions have been made that it is the result of mating with the Turkey, as that bird has also a naked neck. Such may be dismissed without question. The origin is, therefore, left for further observations. We have found these birds widely distributed from Transylvania to the shores of the Black Sea, where they are most prepotent in so far as the bareness of neck is concerned.

**History.**—In this direction, so far as Eastern Europe is concerned, we have been unable to obtain any information at all reliable. The first specimens appear to have been brought to Western Europe in the

second or third decade of the last half of the Nineteenth Century, and attracted attention among those who seek for rare or peculiar breeds. The numbers exhibited in Britain and America are very few, and less in recent years than formerly.

**Economic Qualities.**—During our visits to South-eastern Europe we found that the Naked Necks were regarded as the most vigorous of all poultry, and report was to the effect that they are immune to all disease; the hens are excellent layers, commencing at an early age and laying throughout the winter: the chickens are precocious, and the flesh is very good in flavour and quantity; the birds old and young are excellent foragers, able to find their own nutrition during the greater part of the year. In size they are medium, adult males weighing  $5\frac{1}{2}$  to 6 lbs.; females 4 to 5 lbs.

**Description.**—The body is short, well rounded, and fully developed; legs and neck rather long; head medium in size, with a small single comb, and wattles moderate in length; tail full in the male, and carried horizontally; wings long and strong giving it considerable power of flight; thighs short; toes four. The peculiarity is that the head and neck for about three inches are entirely denuded of plumage, except that on the lower part of the neck there is a small ring or collar of feathers; the comb, wattles, face and bare neck are bright red.

**Varieties.**—There are two varieties, of which the White is most common. In this the contrast between the skin of neck and body plumage is very striking. The Coloured vary considerably in respect to plumage, many being largely red.

### SULTAN.\*

Nomenclature: *Turkish*, Serai-Täook; *English*, Sultan; *French*, Padoue du Sultan; *German*, Sultanhühner; *Spanish*, Sultana.

Variety: One.

Classification: Exhibition.

Colour of Flesh and Skin: White.

Colour of Legs and Feet: Pale blue.

Colour of Egg-shells: White.

**Origin.**—The Sultan is one of the most beautiful ornamental races of Poultry. There is, however, no definite information as to its origin other than stated below. The first specimens were obtained direct from Constantinople. The Turkish name means 'Sultan's Fowl.'

\* Plate XXXIII.







SULTAN FOWLS  
(Drawing by Mr. J. W. Ludlow)

That they were at the time named rare in Turkey is evident. The suggestion has been made that this breed was a special favourite with the monarchs of the period named. Mr. Lewis Wright records (12) that these were also known in Southern Russia. We have not been able to obtain any information in support of this statement. All that is known is to the effect that it originated in South-eastern Europe.

**History.**—The first importation was made in 1854 by Miss E. Watts from a friend living in Constantinople. That lady stated (10) that ‘good fowls of the kind are difficult to get there; our friends have ever since been trying to get us two or three more, but cannot succeed either in Constantinople or other parts of Turkey.’ Many efforts have been made to obtain others. In Tegetmeier’s work (1) Mr. F. W. Zurhorst, of Dublin, mentions a bird said to have been bought from a captain of a ship arriving from the Mediterranean, and which he secured, as it was an exact counterpart of birds descended from Miss Watts’ strain. That is the only instance we have found. The birds which have been kept and exhibited by a few appear to be from the original stock with, probably, an infusion of White Cochin blood. Inquiries in South-eastern Europe have failed to indicate that Sultan fowls are now to be met with in that area.

**Economic Qualities.**—The Sultan is not a race to be kept for production, as it is essentially a bird of feather. The hens, however, are good layers of moderate-sized eggs. Under favourable conditions they are hardy. With so much plumage, especially on the head, they are subject to colds and bronchial affections if allowed at liberty, and need constant protection against rain. The chickens grow quickly and feather rapidly, to which may be attributed the fact that they are difficult to rear.

**Description.**—From the appearance of these birds it may be assumed that what we term Polish have directly or indirectly contributed to the characteristics of the breed. There are, however, fundamental differences between the Sultan and the Polish or its allied races, notably in that the Polish is clean-legged and have four toes on each foot, whereas the Sultan carries heavy vulture hocks, has profuse leg and foot feathering, and five toes on each foot. The hocks and leg feathering may be derived from the Cochin or the Booted Bantam, but such crosses if made would not explain the presence of five toes. The body is



square and deep with short, broad, sloping back and prominent breast; wings long, broad and drooping; neck short, arched, carried backwards; hackle full; head medium in size, with protuberance of skull as in Polish; crest large and globular; beak curved and nostrils large; comb V-shaped and beak horn-colour, almost hidden by the crest; earlobes and wattles small; very full muffs and beard; tail long, with open sickles and abundant hangers; thighs stout with heavy hocks; legs strong and with the feet heavily feathered to the outer toes; plumage long in feather, abundant, soft and pure white throughout. When first imported these birds were smaller than is now the case, namely: males, 6 lbs.; females, 4½ lbs.

### DANISH LANDHEN.

Nomenclature: *Danish*, Landhön.

Variety: One.

Classification: Egg-production.

Colour of Flesh and Skin: White.

Colour of Legs and Feet: Dark grey.

Colour of Egg-shells: White.

**Origin.**—This is one of the common type of fowl met with in Northern Europe, evidently a direct descendant of *G. Bankiva*. It was kept under natural conditions, and small attention paid to it, as fowls were formerly regarded of small importance and their potentialities as profitable stock were not recognised.

**History.**—Until 1875 this type of fowl was universal in Denmark. Introduction of Italian fowls about that period displaced it by reason of their greater prolificacy and the larger eggs. During the present century efforts have been made to improve it by securing a measure of fixity of type and increasing its productivity. Whilst considerable success has been achieved it is not yet equal to the Leghorn for profit.

**Economic Qualities.**—The Landhen is a small-bodied fowl, lacking in flesh qualities, moderate as a layer, especially in winter, and producing eggs which are small. It is very hardy, and the chicks precocious. They are excellent foragers, and inexpensive to maintain on range.

**Description.**—The body is short and broad, both in breast and stern, the back sloping well to the tail; wings small and carried well



up; neck medium in length, very thick; head of medium size, with strong beak, dark in colour; comb single, upright, moderate in size, with four to six serrations, and extending well over the neck, yet not curved; wattles good size and round; earlobe, white; legs short and stout, dark grey in colour; tail full in male, with large sickles; colour of breast, wings and tail, black; back dark red; neck hackles bright red in male, in females salmon-colour on breast, back brown with dark markings, neck hackle straw with dark markings. Weight: male, 4 to 4½ lbs.; female, 3 to 3½ lbs.

### POLISH GREENFOOT.

Nomenclature: Polish Greenfoot.

Varieties: Partridge, White.

Classification: Egg-Production.

Colour of Flesh and Skin: White, changing to yellow with age.

Colour of Legs and Feet: Dark or green.

Colour of Egg-shells: Various.

During recent years there has been a great development of Poultry Husbandry in what is now Poland, as indicated by the increase of exports. This has been due to efforts of the Central Committee for Poultry Breeding in Poland, which has taken steps for fixing and improving a common fowl widely distributed, to which the name Greenfoot has been given. The standard adopted has kept in view the productive qualities as well as the external characters.

**Origin.**—On this aspect of the question no evidence is forthcoming. The suggestion, however, is made that it was first introduced from Asia, though possibly modified by crosses with some of the Mediterranean races.

**History.**—All that can be stated in this connection is that fowls of the type named have been known in the country for many generations, although there was little or no attempt to adopt a consistent type or to improve by selective breeding. That is now undergoing change. Poultry Husbandry is recognised as a pursuit worthy of encouragement, and a means of improving the well-being of the people.

**Economic Qualities.**—These fowls are small in size of body, and, therefore, the flesh is sparse though good in quality, and white in colour. The hens are essentially layers. Flocks have attained an

average of 130 eggs per annum, and individuals a much higher number. The eggs vary in size, and are usually very round. These birds are very active, hardy, and excellent foragers. Older hens prove to be good sitters and mothers.

**Description.**—The body is broad and deep, set widely between the thighs; back long and broad, well developed behind; breast full; wings closely fitting; tail carried backward; neck of medium length; head medium in size, with large, fiery eyes, a fine single comb, and medium wattles; legs short and strong; four toes on each foot. Weights: males  $4\frac{1}{2}$  to  $5\frac{1}{2}$  lbs.; females,  $3\frac{3}{4}$  to  $4\frac{1}{2}$  lbs.

**Varieties.**—Partridge, that is, brown-red as the Jungle fowl, Black-red Game, Brown Leghorn, etc., and White.

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CHAPTER X  
BRITISH RACES OF FOWLS.





## CHAPTER X

### BRITISH RACES OF FOWLS.

|                       |                  |
|-----------------------|------------------|
| GAME.                 | REDCAP.          |
| DORKING.              | CORNISH GAME.    |
| SUSSEX.               | SCOTCH GREY.     |
| ORPINGTON.            | SCOTTISH DUMPIE. |
| HAMBURGH.             | MARSH DAISY.     |
| OLD ENGLISH PHEASANT. | COVENEY WHITE.   |

For more than two thousand years the breeding of poultry has been known in what are now termed the British Isles. More recent researches have shown that the Ancient Britons were, prior to the Roman invasion, civilised to a considerable extent, and that there was a communal life which indicated systematised food production and breeding of animals. As already shown when Cæsar conquered the greater part of England the inhabitants were found to be devoted to the sport of cock fighting. From that time onwards, with evident intervals, until the fourth decade of the Nineteenth Century, when Cocking was made illegal, British poultry were chiefly of that order, though not entirely so. During the first half of last century several breeds were imported. Correlative with the prohibition of cock-fighting in 1849 was the introduction of the Shanghai fowl, and the rise of the exhibition system, as a result of which the breeding of pure races of poultry in Britain from 1850 to 1890 was largely on fancy lines. The development of Poultry Shows was phenomenal, exerting a powerful influence in the national life. At first production values were made prominent. Later, extremes were sought for, points of small relative importance were exaggerated, and variations encouraged. The world was searched for rare and novel types. Many of these alien races have by their valuable qualities attained a greater amount of popularity

than the native breeds. Undoubtedly there is more diversity of fowls in Britain than in any other country. The influence of what is commonly termed fancy breeding in some cases was destructive of economic qualities, due to exaltation of external characters necessitating repression of the functional activities. On the other hand the enthusiasm of fanciers led to the introduction of some of our most valuable breeds. The publicity given to these by exhibitions conduced to their wider dissemination. Whilst, therefore, great injury was wrought in the directions indicated, it is unquestionable that the benefit derived from the exhibition system has more than compensated for the loss, and that the balance is on the right side. That is especially the case from the fact that during the present century exhibitors have recognised that the perpetuation and development of production is of equal importance with an advance in externals. The latter is desirable, and in that field there is great need for the skill and patience of breeders who are not mainly concerned with food production.

### ENGLISH GAME.\*

Nomenclature : *English*, Game ; *French*, Combattants Anglais, or Race de Combat Anglaise ; *German*, Englische Kämpfer ; *Dutch*, Engelsch Vechthoenders ; *Italian*, Grande Combattente ; *Spanish*, Combatiente Inglis ; *Danish*, Kamphons ; *Hungarian*, Kőzönséges.

Varieties : Black-breasted Red, Bright Red, Brown-Red, Blue-Red, Pile, Yellow Duckwing, Silver Duckwing, White, Black, Spangled, and others.

Classification : Exhibition, Table.

Colour of Flesh and Skin : Chiefly white, in a few cases cream.

Colour of Legs and Feet : Various.

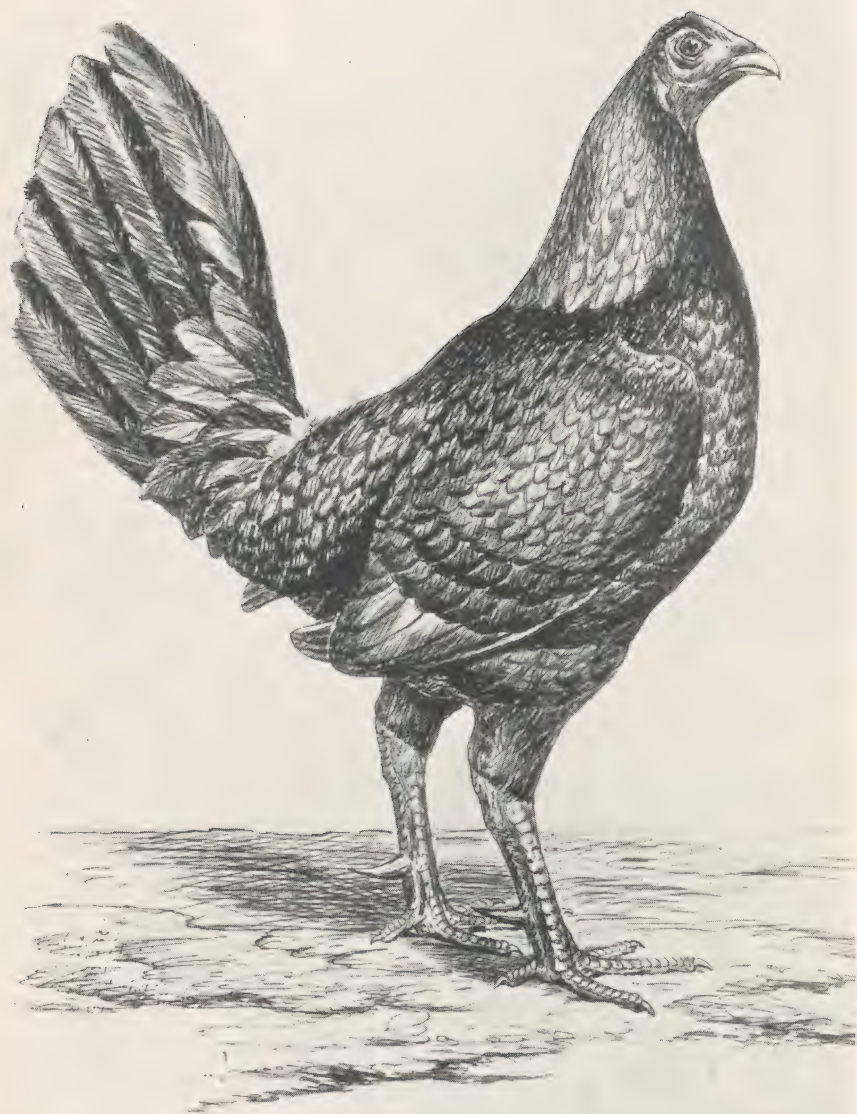
Colour of Egg-shells : Tinted.

A very interesting study, one which, however, has not received the consideration deserved, is the influence of pursuits, which are no longer met with to the same extent as in former centuries, upon modern life. We are to a large extent the inheritors of influences which, having fulfilled their purpose, have passed into oblivion. Strife and fighting was the normal condition of man. The world's history is one of constant turmoil and conflict. Unfortunately that is still the case. Deadly though modern wars have become, the intervals of peace are longer than ever before, by reason of the fact that the results, even to the victors, are supremely disastrous. In olden times war was the regular, peace the exceptional condition of affairs. The Great

\* Plates I (Frontispiece), XXXIV to XXXVI.







GROUSE-COLOURED OLD ENGLISH GAME COCK  
(Bred by the late John Harris, Liskeard, Cornwall)

War of 1914-18 has shown how great are the changes due to mechanical inventions. The story of all countries is an exemplification of that inexorable law of 'survival of the fittest'—a law which is as potent as ever, although its application is in other directions. Among the nomads or thinly-populated nations only he could expect to live who was able to defend his life and property. This is indicated in the internecine conflicts throughout the centuries in Britain, the frontier struggles and the racial enmities in America, and the defensive measures of civilised communities on the threshold of 'Darkest Africa.' The Pele Towers to be found on the Scottish border speak volubly of the time when life was a succession of raids and forays, of dread alarms and savage incursions. Under such conditions courage and prowess could not help being the principal virtues. A 'mighty man of war' became the idol of his age, his deeds the emulation of every rising youth. Nor is this spirit dead. Even in the most civilised nations a successful General or Admiral receives the greatest honours his fellows can accord to him.

So long as fighting is the chief defence of men and nations, everything is encouraged that stimulates courage and bravery. A man's environment influences his nature. Thus the amusements of savage races are brutal to civilised people. Were it not so there would be no pleasure in them. Had we lived in ancient Rome we should have joined in the excited mobs that witnessed the gladiatorial conflicts; had we lived in Britain five centuries ago we should have felt our blood beat fast to witness the tournaments in which brave knights bit the dust; were we Spaniards now we might regard the blood-thirsty and cruel bull-fighting as the finest of all sports. What is here stated is still in evidence in many of the sports which disfigure our civilisation. We cannot regard the practice of cock-fighting, as followed by our forefathers, from our own standpoint. In these days that sport is rightly condemned by civilised and cultivated people, except, perhaps, where ancestral blood exercises its prepotency. Brute force, however, of which cock-fighting is an expression, is no longer the necessity which was once the case.

**Origin.**—One of the first objects of domestication in connection with the fowl, was not so much to supply man with food, though that entered into it, but rather to meet the desire for recreation and to



fulfil his craving for sport. Whilst, therefore, we may by reason of our advance in civilisation and greater refinement no longer follow the same lines as our forefathers, we may freely acknowledge our indebtedness to them in this and other directions. Consequent upon the fact that the Game fowl is directly descended from the *Gallus Ferrugineus* (or *Bankiva*), it resembles the original type. It was bred many centuries ago for its fighting instincts in Eastern and Southern Asia, which is the habitat of the wild progenitor. Such changes as have been brought about are the result of breeding to develop the combative instincts. The late Charles Darwin presents a large amount of evidence in support, and says (1) : ' From the extremely close resemblance in colour, external structure, and especially in voice, between *Gallus Bankiva* and the Game fowl ; from their fertility, as far as this has been ascertained, when crossed ; from the possibility of the wild species being tamed, and from its varying in the wild state, we may confidently look at it as the parent of the most typical of all the domestic breeds, namely, the Game fowl.' One difficulty, however, which presents itself is that the sport of cock-fighting, and, therefore, fowls, was known to the aboriginal inhabitants of North and South America. In the absence of greater knowledge as to whether there had been any contact between Asia and America prior to the fifteenth century, it is possible that the Spaniards, soon after their discovery of America, conveyed Game fowls across the Atlantic, and that these had been bred on the Western Continent for a considerable time before careful and reliable observations were made as to the fauna of the Western Hemisphere.

**History.**—The Game fowl cannot be regarded apart from the sport of cock-fighting. Given the spirit to which reference has been made, and that animals and birds in a state of nature must possess great powers of defence, it is evident that pugnacity would be highly developed. Hence the material for exercising such a sport was at hand. Domestication has not entirely destroyed the desire for fighting, as can be seen in every poultry-yard. The presence of a couple of cocks around the dwelling or tent of Indian or Persian would afford the opportunity of a main without effort or intent. Opportunity is responsible for many results, and stimulates a desire for them. Thus primitive man was led to select those birds which displayed the

greatest courage and skill in fighting, and would breed from these so as to increase and perpetuate such characteristics. The influence of this sport in the domestication and distribution of fowls is referred to in the earlier Chapters.

Among the nations of Western Europe England has been notable for cock-fighting, and breeding with this object in view, far in excess of any other. As mentioned in Chapter I the sport was well established prior to the Roman conquest, and it is reasonable to assume that it had been introduced by the Phœnicians for a considerable time before then, possibly about the same time as it was taken to Italy, if not correlative with its adoption in Greece. From the absence of records it may have been that during the Saxon and early Norman periods it was to some extent repressed, except, perhaps in the more remote areas such as Cornwall. Mr. Pegge, in the 'Archæologia,' states his inability to discover any references showing this to be a recognised sport before the time of William Fitz-Stephen, who wrote the life of Archbishop Beckett in the reign of Henry II (1154-1189). In his work cocking is referred to as the sport of school-boys on Shrove Tuesday, called 'Camilvaria,' in which the master was compelled to allow the fight, receiving fees for the privilege. From that time onwards it entered more or less into the English national life. Upon this point Rees (2) says that 'by some cock-fighting has been called "a Royal diversion," and much encouraged both by Henry VIII and James I; but it was forbidden by one of the Acts of Oliver Cromwell, March 31st, 1654. There are no documents that we are acquainted with to inform us in what state the act of fighting-cocks existed prior to the reign of Henry VIII, who, it is supposed, founded the celebrated Cockpit at Westminster, afterwards renewed and encouraged by Charles II, whose pile-cocks, the introduction of that monarch, are in high estimation among breeders at this day. From that period annual mains have been fought at the Royal Cockpit at Westminster to the present time.'

Markham devoted one section of his work on 'The English Husbandman' to 'The Fighting Cocke,' which was also published in separate form. (3) His quaint description, penned more than three centuries ago, is worth reproduction. In this he says:

'To speak then as to the choyce of the fighting-cocke, you shall



understand that the best characters you can observe in him are the shape, colour, courage, and sharpe heele ; for his shape the middle and indifferent size is ever looked for, for they be ever matchable, strong, nimble and ready for your pleasures, whereas the huge one (which we term the turne-pocke) is ever ready to find an equal, lubberly, and affording small pleasure in his battell ; and so the exceeding little cocke is hard to match, and is commonly weake and tedious in his manner of fighting. Hee would bee of a proud and upright shape, with a small head, like unto a Spar-hawke, a quick, large eye, and a strong, big crookt beak, and in colour suitable to the plume of his feathers, as black, yellow or reddish. The beame of his leg would be very strong, and according to his Plume, blew, grey, or yellow ; his spurs long, rough, and sharpe, a little bending and looking inward. For his colour the grey pyle, the yellow pyle, or the red with the black breast, is esteemed the best ; the pyde is not so good, and the white and dunne are the worst. If hee be redde about the head, like scarlet, it is a signe of sicknesse and faintnesse. For his courage you shall observe it in his walk, by his treading, and the pride of his going, and in the pen by his oft crowing. For the sharpness of his heele, or as the cocke-masters call it, the narrow heele, it is only seen in his fighting, for that cocke is said to be sharpe-heeld or narrow-heeld, which every time he useth himself, and draweth bloode of his adversary, guilding (as they terme it) his spurres in blood, and threatening at every blow to put an end to the battell. And these Cockes are sure of great estimation, for the best cocke-masters are of opinion that a sharpe-heeld cocke, though he be a little false, is much better than the truest Cocke which hath a full heele, and hitteth seldome, for though the one fight long he seldome wounds, and the other, though he will not endure the uttermost hewing, yet he will make a quiet dispatch of his business, for every blow puts his adversary in danger. But that Cocke which is both assuredly hard, and also very sharpe-heeld, he is to be esteemed, and is of the most account above all others, and therefore in your generall election, chuse him which is of strong shape, good colour, true valour, and of a most sharpe and ready heele.'

Buffon and other naturalists do not throw much light on the different varieties of the Game fowl, and for these particulars we shall have to seek elsewhere. Moubray gives prominence to the breed and



makes a defence of cock-fighting on the ground that the birds enjoy the sport, for ' 'tis their nature to.' He even defends the use of spurs; because they 'shorten the period of their sufferings.' He says further (4) that 'their flesh is of the most beautiful white, and superior to that of all other breeds of domestic fowls for richness and delicacy of flavour; but the extreme difficulty of rearing the chickens—for their natural pugnacity of disposition shows itself at the earliest possible period—deters most breeders, excepting those who breed for the pit. I have many times had whole broods, scarcely feathered, stone-blind from fighting, to the very smallest individuals, the rival couples moping in corners, and renewing their battles on obtaining the first ray of light.'

The same writer quotes a very interesting statement as to the origin of the custom of throwing at cocks on Shrove Tuesday, which may be true, requiring, however, confirmation. It is stated that whilst the Danes were masters of England, and lorded it over the natives, the inhabitants of a certain city, grown weary of slavery, had formed a secret conspiracy to murder their masters in one bloody night, when twelve men had undertaken to enter the town hall by strategem, and, seizing the arms, surprise the guard which kept it, at which time their fellows, upon a given signal, were to come out of their houses, and murder all opposers; but while they were putting this plan into execution, the unusual crowing and fluttering of the cocks near the place which they attempted to enter discovered and frustrated their design, upon which the Danes became so enraged that they redoubled their cruelty, exercising still greater severity over the English. Soon after, however, the English, being freed from the Danish yoke, instituted the custom of cocks on Shrove Tuesday, the day of their disappointment, from a stupid and barbarous passion of revenge against the innocent cause of their misfortune, instead of admiring the natural vigilance of the birds. This infamous sport, although at first only practised in one city, in process of time became a national diversion.

As already indicated cock-fighting has been for milleniums a great sport in India and Southern Asia generally, and much of our best Game fowl blood has emanated from the great dependency. A famous old cocker, the late John Harris, of Liskeard, Cornwall, wrote a

valuable letter on 'True Indian Game,' which must not be confounded with the breed so designated in English exhibitions, as these are Cornish game. He says (5) :

'The Indian Game cock has been known to Englishmen ever since they have had communication with India. There is a tradition that some cocks were fought in the Royal Pit, Newmarket, before King Charles II, to whom they had been sent as presents ; and that several were fought and beaten in a main at Market Drayton about 140 years ago, that had been selected and sent by the friends of Clive. And a few years earlier Reed, animal painter to His Majesty King George, painted the portraits of an Indian and an English cock doing battle. Another painting by a native artist was brought to this country, representing two cocks, belonging to rival Rajahs, fighting for the large stake of £10,000. The fame of these cocks induced Colonel Mordaunt to take a large number of English cocks out to India, so as to settle the question of Superiority. A large engraving of this main, containing portraits of many celebrated sportsmen, both English and native, is in possession of the Game Cock Club. About eighty years ago one of the keenest cockers then living brought home several birds, selected from the best strains he had seen fight in India, which were minutely described by the sporting press, accompanied by a print, and represented as quite distinct from the worthless Chittagongs and Malay breed. Lord Cholmondeley, Admiral Rous, Lieutenant Lewis and Colonel Golbert, were also the recipients of very good birds from India, many of which came into my hands ; and probably no better birds were ever sent to England than those selected by my friends Captains Dickson and Astley, and occasionally a few are exhibited in the variety class at shows, many of which appear to have been selected for feather and appearance in preference to purity of breed and sterling game qualities. Exhibitors, probably from an idea that they are some new or fancy breed, frequently call them Aseels. Surely the English language is sufficiently explicit even for the fads and whims of the fancier, without introducing the Indian dialect. The well-known term of Indian Game has always been used by Englishmen both in England and India, in contradistinction to English Game, frequently pitted against each other in the palmy days of the Sod in England, and occasionally in India. These contests failed to prove any superiority





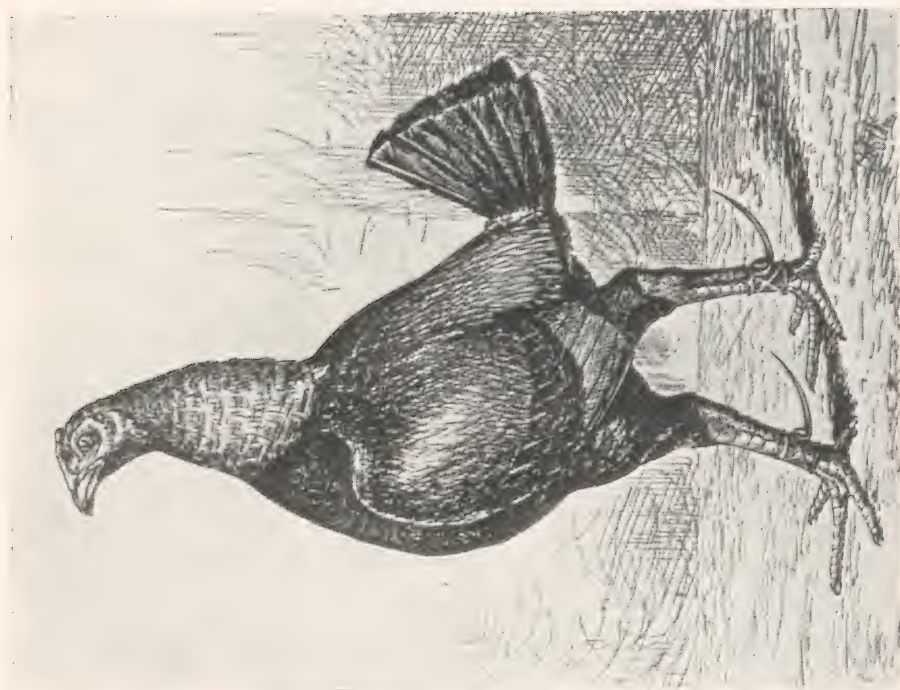


*Photo, A. Rice*

OLD ENGLISH GAME COCK

(Bred by Mr. R. Kerr, Whitehaven)

1st Birmingham Show



GAME COCK (trimmed)

of the one breed over the other, as each almost invariably won in their native country, for the simple reason that the long voyage and change of climate had such a depressing effect on the migrants that they were half beaten before they were brought into the pit. Besides, the Indian Game is bred solely for courage and endurance, the grand requisites for which are great strength and deep game, whilst the English Game is bred for sudden death. He must carry a deadly heel, be quick and wary, for that cock is ever the best in the English pit that wins quickest. Cocks bred from a cross of Indian and English birds are as game as possible, but I have never known it improve either breed to the extent that might reasonably be expected. Some time after Captain Astley's last return from India a great main was fought, North *v.* South. I was not present, but meeting Moss, the clever cock-setter, shortly afterwards in Manchester, I asked the reason for his getting beaten so easily, and he replied : ' Couldn't help it ; those half-bred Indians could not fight fast enough to keep themselves warm.' Again, shortly before he returned to India, a main was made for £1,000, one side fighting birds crossed with Indian Game, the other pure-bred English Game. The former lost six out of the first eight battles fought, when a gentleman who breeds as good cocks as anyone in England made me this observation concerning the Indian Game cross : ' They are very game, and can fight for endurance, but they cannot kill,' an opinion which I fully endorse.

It is evident that whilst we may have originally had valuable Game cocks from the Far East, centuries of skilful breeding devoted to the English Game cock, and for the purposes of the cock pit, have made that fowl one of the best fighters and the most beautiful specimens of his species in the world. What the influence since cock-fighting was made illegal is considered later.

How largely this pastime entered into the English national life is seen in many directions. In London are ' Cockspur Street,' ' Cock Lane,' ' Cockpit Steps,' etc. The most remarkable connection was with regard to school life. As mentioned above, schoolmasters received a regular fee for permission to fight cocks in the schoolhouse on Shrove Tuesday, as far back as the reign of Henry II. In 1790 the income of the schoolmaster of Applecross, in Rossshire, Scotland, was made up by salary, fees, and cock-fight dues. Hugh Miller, in ' My



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Schools and Schoolmasters,' records the yearly cock-fights in the grammar school of Cromarty, about the year 1812. In a reference to Cartmel, near Grange-over-Sands (Lancashire), given in 'The History of Furness,' it is stated that 'A curious custom formerly observed at this, as well as other grammar schools, was the gratuitous payment which was expected from all the scholars at Shrovetide. This gratuity differed in amount according to the social position of the parents of the pupil, and ranged, Mr. Baines tells us, at the beginning of the nineteenth century from 2s. 6d. to £5. These payments were called cock-pence, and probably originated in the barbarous amusement of cock-fighting and cock-throwing which was indulged in on Shrove Tuesday.' It may be mentioned that the Furness district was a great centre for this sport.

It seems to have been a custom in all the old grammar schools for each boy to make a payment of one penny to the master for the privilege of cock-fighting on that day. The boys brought Game cocks to school, and amused themselves the whole morning in watching their encounters. In Scotland the master claimed the dead bird as his perquisite. The scenes enacted were brutal in the extreme, and must have had an injurious effect upon the lads' minds.

The final Act of Parliament in Britain suppressing cock-fighting as a recognised sport was passed in 1849. It provided that a penalty of £5 may be levied on any person keeping cocks for fighting, letting a cockpit, or otherwise connecting himself with cock-fighting, for every day that he shall so act, and this penalty is enforced whenever captures are made. This date is important, as it is practically that of the beginning of the British show system, the first exhibition of poultry being held in 1848. It also makes an era in the history of the Game fowl.

In order to trace the influence of exhibitions upon the Game fowl, it is necessary to discern what were the varieties known to cock-fighters in former days. Colour did not, however, hold the position in breeding which is requisite for the show pen. A good fighter could not be a bad colour. At the same time colour was more or less regarded as a sign of purity of race. For instance, Gervasse Markham says (3) : 'For his colour the grey pyle, the yellow pyle, or the red with black breast, is esteemed the best ; the pyde is not so good, and the white and



dunne are the worst.' Upon this point many other quotations could be made, but are needless previous to one hundred years ago.

In a work published in 1798, a copy of which is in the British Museum, and 'Humbly Inscribed to those Gentlemen who are AMATEURS of the GAME COCK, that Prodigy of British Valour, by a Gentleman who has been in the habit of Breeding these eight-and-twenty years,' as to the respective varieties the writer says :

'The variety of cocks bred in this kingdom, and the opinions of men being as various, it is difficult to say what sort to recommend in preference to any other ; for in one part of the country they are partial to piles, in another to

BLACK-RED.

SILVER BLACK-BREASTED DUCKS.

(DUCKWING.)

DARK GREYS.

SPANGLES.

BLACKS.

POLECATS.

CUCKOOS.

GINGERS.

BIRCHEN DUCKS.

MEALY GREYS.

RED DUNS.

FURNACES.

CUSTARDS.

in all of which good birds are to be found. But we are all too prone to change, and our choice is frequently attracted to make trial of cocks which are every now and again exhibited to our view, without any regard to similarity of feather, constitution, or other concomitant to make the cross uniform ; for frequently reds are put to greys, birchens to piles, and all contraries imaginable, which produce the many-coloured fowls you see in every match.' He gives the names of about fifteen other varieties, in many cases slightly different from those already mentioned.

In 1814 was published a book on 'The Cocker,' by W. Sketchley, Gent, which deals very exhaustively with the subject, and was the work of a man who is reputed to have been engaged in the sport for fifty years. In this is given a very complete list of the varieties of the Game fowl. Additional to those mentioned above are duns and smoky duns. The author speaks of crossing as follows (6) :

It has always been a matter of surprise to me to see the wonderful

avidity, even in experienced breeders, in expressing a wish of obtaining a single cock for a day's fight, that has exhibited something out of the common routine of play, in order to breed from, when I have been sensible of the impropriety of the cross he was destined to make—in fact, with hens that were as dissimilar in feather and other similarities as possible. If uniformity in their general appearance is absolutely necessary in forming a regular breed, I cannot help expressing my wonder at well-informed men running into an error so fatal to the welfare of judicious breeding, and which must convince a reflecting mind that from such unnatural, or at least incompatible, crosses we are indebted to the public for such a strange medley of colours as we see in every main, when a few years' attention would exhibit cocks of a very different stamp.'

He details the 'incongruous' mixtures, and points out how these have been produced, offering suggestions as to the true system to be adopted in breeding. Sketchley appears to have been one of the first to lay stress upon the importance of varieties with definite colour of plumage.

The early editions of Moubray's 'Practical Treatise' do not give any details as to the varieties of the Game fowl. In that published in 1854 is a long list of these. Various other works could be named. These, however, merely reproduce Sketchley's list. By 1848 when exhibitions were inaugurated many of the minor varieties appear to have been weeded out or to have been overshadowed by others. In Dixon's book (7) only those below are mentioned :

The Furness Game Fowl.  
 Cheshire Piles.  
 Streaky-breasted Red Piles.  
 White Game.  
 Black-breasted Reds (Derby).

This list does not pretend to be complete, as the author throughout merely refers to the more prominent varieties.

The first show held at Birmingham was on December 9th, 1851, at which there was a good display of Game fowls. It ultimately became the most important British Game fowl show of the year, at which what







MODERN BLACK RED GAME COCKEREL

(Bred by Mr. J. Swell, Brechfa, Nantgaredig, Carmarthenshire)  
1st Birmingham



MODERN BLACK RED GAME PULLET

(Bred by Mr. J. Swell, Brechfa, Nantgaredig, Carmarthenshire)

*Photos, A. Rice*

were the modern type of birds became a leading feature. At the first show two classes were provided for Game. In a report of the classes before us it is stated that there were exhibited Worcestershire Piles, Black-breasted Reds, Duckwing Greys, Birchen Greys and Blacks. The year following 164 pens of Game fowls were displayed at the Midland exhibition. In 1853 the First Metropolitan Poultry Show was held, opening at the Baker Street Bazaar, London, on January 11th, at which seven classes for Game were provided with forty-eight entries. The classes were for (1) Whites and Piles; (2) Black-breasted and other Reds; (3) Blacks and Brassy-winged, except Greys; and (4) Duckwings and other Greys and Blues.

The first attempt to deal exhaustively with domestic poultry, excepting in connection with cock-fighting, was the work entitled 'The Poultry Book,' by Messrs. Wingfield and Johnson. Although this is manifestly incomplete in many directions, being primarily written to advance the interests of Shanghai fowls, then causing a furore or boom, it offers material help to the student (8). Here may be mentioned that 'The Poultry Book,' published under Mr. W. B. Tegetmeier's name some years later, is a revised and enlarged edition of that just named. That fact is mentioned in the first edition, published in 1867. The second edition, issued in 1873, does not bear any indication of its origin. Wingfield and Johnson, speaking of the characteristics of the Game fowl, say:

'When we approach the question of colour, our task becomes more intricate (than that of general appearance and style) since, from the anxiety to avoid any deterioration either in figure or in courage, crosses have been constantly resorted to. But these inter-marriages not having been always regulated with sufficient judgment, so as to retain the points and colours of the different varieties, a multiplicity of sub-varieties present themselves to our notice, many of which are still further complicated by the use of synonyms of merely local authority.' What is here stated explains the many names adopted which are often puzzling.

With the abolition of cock-fighting as a national sport, except surreptitiously, and the advent of the exhibition system, there came about a change which modified the Game fowl. For reasons which have never been explained, the ideals of exhibition breeders departed



as far away as possible from those of the cock-fighter, except in coloration of plumage, even though much of the pugnacity of the race was maintained. This is surprising when it is remembered that the qualities inseparable from prowess in the cock-pit conduced to development of the most perfect specimens of the race to be found under domesticated conditions, save, perhaps, in respect to coloration of plumage and to the development of fixed varieties. Whilst we condemn sport in so far as it involves cruelty to animals or birds for the sake of pleasure to those sharing in it, the fact cannot be denied that natural methods are cruel, and that the highest beauty of form is associated with conquest. Often coloration is influenced in the same manner. That is how natural beauty is evolved. Only the fittest, those able to justify themselves by overcoming enemies, are able to maintain their place and become the parents of future generations. To that extent the breeder who reproduced the natural conditions, in so far as the fighting instincts are concerned, even though we may rightly condemn his actions, was maintaining as far as possible under domestication, the qualities of his birds, retaining that perfection of form which is characteristic of the original stock.

Exhibition breeders, as in so many other instances, disregarded the ideals of cock-fighters, and adopted those which destroyed the balance of nature, thus evolving what were in reality abnormalities if not monstrosities. Gradually breeding on these lines completely altered the type by elongating the neck and legs, refining the head, shortening the hackles and tail, and reducing the depth of body by seeking for what is termed 'reach,' until the modern Game fowl became, except in colour, as divergent from the original as is the shire horse from the hackney. It was no longer a bird of beauty, but one of exaggeration. The process was comparatively rapid. In forty years (from 1850 to 1890) the points which had characterised the fighting Game fowl had been largely sacrificed. Not only so but their merits as layers and for meat properties were much reduced. The old Game fowl needed powerful wings and limbs. Hence muscular development was necessarily great. As the wings are worked by the muscles upon what we call the breast or keel, decrease of these was followed by smaller and softer muscle and loss of vigour. The old cockers unconsciously made the Game fowl one of the finest domesticated birds



for table purposes. Their successors weakened these qualities in seeking for the merely ornamental. When cock-fighting became illegal, and the birds were no longer exercised in the pit, breeding became general rather than special. Under such conditions modifications were bound to follow. These were accentuated and changes brought about which need not have accrued. The show Game fowl became a mere shadow of what it had been as exaggerations were carried to an extreme, often weak on the legs and difficult to rear. Thus there came a reaction and the classes for these birds lost the prominence they had formerly occupied, whilst the number of breeders was much reduced.

Fortunately, for the breed, the English Game fowl had not been entirely displaced. In many parts of the country—more especially in Cornwall and Cumberland, where a considerable amount of cock-fighting was surreptitiously carried on—breeders retained the old type, preserving them in their original purity. In 1883 classes were provided for Old English Game fowls at shows in the North of England. Ultimately breeders formed the Old English Game Club, to which we owe the preservation of what may be regarded as the most typical race of poultry. Classes for these birds are given at nearly all the leading exhibitions. It is generally admitted that the annual show of the Club is one of the great events of the year, at which some of the finest specimens, those retaining the original qualities, are displayed.

**Economic Qualities.**—The English Game has never attained wide popularity among ordinary poultry-keepers or farmers, nor is it likely to do so, owing to its pugnacity. Cockerels and pullets will fight when quite young. The producer prefers a breed which gives less trouble in that direction, which, however, may be carried too far. Ultra-amiability is a sign of degeneracy. Mr. Herbert Atkinson suggests that (9) ‘this inherent quarrelsome disposition, so characteristic of the breed, renders it unsuitable for those who have only a confined space, or desire to keep a large number of fowls, and confinement does not suit them; the chickens become weak, and the hens become indifferent layers. The Old English Game is essentially the breed for the country gentleman, who desires fowls and eggs for his own table.’ There is, however, another explanation why the Game fowl is not more popular for exhibition, namely, the custom of dubbing, or cutting off the comb and wattles. That was a necessity for the cock pit. It has

no justification for other purposes, and the practice is objectionable and a deterrent to many who might otherwise take up the breed.

‘Old English Game,’ says Mr. Atkinson (10), ‘stand in front of any variety whatever as table fowls, carrying, as they do, the largest proportion of white, delicate, and nutritious meat, with the smallest amount of waste, offal or bone. They carry more meat in proportion to their size than any other fowl, and, killed from a good run, they resemble the pheasant in flavour more than other fowls. Many strains of Game are excellent layers of good-sized and beautifully-flavoured eggs, Hennies, Black-breasted Reds and Piles standing first in this respect. I have had Game hens laying over sixty eggs before becoming broody, and continue laying throughout the greater part of the year. As sitters and mothers they are invaluable; quiet on their eggs, close sitters, regular in leaving and returning to their nest, and when the brood is hatched they are the best of mothers, not trampling or killing their chickens by treading them under foot, as is often the case with large and heavy breeds; whilst against cats, vermin, or, indeed, any enemy, they will defend them to the last. Another recommendation is that, according to their size and weight, they have smaller appetites and can subsist on less food than any variety; indeed on a good run they will almost get their own living, foraging everywhere, not standing about as in the case of the Asiatic breeds, but ever moving. They are very valuable for an unprotected place, whether it be a wild run or near a road or a stable-yard, both from their activity in avoiding danger themselves, and their courage in defending their little ones. They will not bear fattening, but are always full of good meat if on a good range, and with suitable food they are plump and meaty from little chickens, while their quick growth and hardihood are two other valuable points not to be lost sight of. They will roost in the trees throughout the winter with impunity; indeed they never do well, nor show such splendid condition and plumage, as when they roost in the trees or open sheds, etc., all the year round.

Apart from their beauty of plumage and fighting nature the great value of this breed is for crossing. If mated with soft-fleshed races the progeny is unsurpassable in flesh qualities.

**Description.**—In body the Old English Game is broad in breast,



which is full and straight and of medium length, well rounded at the sides, wide at the shoulders, and tapering well to the tail ; the neck is rather long, very powerful, especially near the shoulders, and well covered with an abundance of long hackle feathers, carried over the shoulders ; the head is narrow, medium in length, beak strong and slightly curved, eyes full, bright and expressive : the thighs are short and stout, with rather long shanks, substantial in bone, flat and unfeathered ; toes long and well spread, so that the bird stands flat on the ground ; the wings are long and very strong ; the tail full, well expanded, nearly upright, with abundant, broad and well-curved sickles, the saddle hackle also full. The appearance is that of a rather large, round, full-fronted, muscular, but perfectly symmetrical fowl, active and sprightly. Weight : males, 5 to 6 lbs. ; females, 4 to 5 lbs.

The differences between the Old English and Modern Game are in structure, as colours are much the same, though more limited in the latter. The Modern are much longer in the neck, head and legs, giving them a stilted aspect ; the wings are short, and also the tail, which is closely whipped, carried somewhat high, and with fine sickles. Weights : males 7 to 9 lbs. ; females 5 to 7 lbs.

**Varieties.**—The varieties of English Game are very numerous. It is unnecessary to give these in detail. Those who desire to study them can find full information in the various Standards. The following are the more prominent : Black-breasted Reds, Brassy-winged Reds, Brown-breasted Reds, Bright or Ginger Reds, Yellow Duckwing, Silver Duckwing, Red Piles, Blacks, Whites, Spangled, Cuckoos, Hennies, Muffs, Tassells, etc.

### DORKING.\*

Nomenclature : Dorking in all countries.

Varieties : Dark or Coloured, Red, Silver-Grey, White, Cuckoo.

Classification : Exhibition, Table.

Colour of Flesh : White.

Colour of Legs and Feet : White.

Colour of Egg-shells : White.

**Origin.**—Generally it is accepted that the Dorking fowl is descended from birds introduced during the Roman domination of Southern Britain. The same is true of races met with in some parts of France.

\* Plates XXXVII and XXXVIII.



In this connection may be remembered that both Gaul and Britain were subject to Roman power for several centuries, when intercommunications between Italy and these two countries were constant. In support of the theory named evidence is circumstantial, not direct. In fact records only carry us to the seventeenth century. In a work by Mr. G. Ferguson (11) he states that 'from 1683 to the present time we have ample proofs that the principal fowls of this description have been bred at Dorking or its environments, and that they have had for a considerable period, and do still retain, the credit of supplying the market with the finest specimens both for appearance and the table.' What authority the writer had for tracing back the Dorking to 1683 is not stated, and we cannot form any judgment as to its reliability. That, however, does not carry back very far, as the date of the Roman evacuation of Britain was in A.D. 411. The only evidence is that Columella, a Roman writer who lived during the first century of the Christian era, described a breed then existing in Italy which was in most respects similar to the present-day Dorking. He stated that 'those hens are reckoned of the purest breed which are five-clawed, but so placed that no cross spurs arise from the legs.' He further says: 'Let them be of a reddish or dark plumage, and with black wings. . . . Let the breeding hens, therefore, be of a choice colour, a robust body, square build, full-breasted, with large heads, with upright and bright red combs. . . . Those are believed to be the best bred which have five toes.'

Further evidence is given as to the fifth toe. Pliny, whose 'Historia Naturalis' was published in A.D. 77, says, 'Superiority of breed in hens is indicated by an upright comb, sometimes double, black wings, ruddy visage, and an odd number of toes.' The evidence is very meagre, and we are compelled to assume a great deal. In Ferguson's work, already referred to (11), he states that from the southern parts of Italy friends had procured three specimens which were facsimilies of the English Dorking, with the exception of the size, as they were smaller. During visits to Italy we have found birds having considerable resemblance to the Dorking, although it was suggested some of these were from stock imported from Britain. From these references it may be accepted that a breed of the Dorking type was known in Italy at the period of the writers named. Also that when the Romans

held Britain they introduced into the country animals and birds from their own land. Be that as it may, evidently fowls resembling the Dorking and its relative the Sussex, have been recognised for centuries. It is not, however, until the eighteenth and nineteenth centuries that we have any definite records. In a work published by the great Frenchman, de Reaumur, but which does not deal much with breeds, is the following statement (12): 'The hens of one of these species have five toes, viz., three fore and two hinder ones; the second of these two hinder claws, which is the supernumary, is much larger than the other; it seems not, however, to be the most useful to the foot, as it keeps frequently off the ground. As for the rest, this kind of hen is one of the largest, and deserves, on account of their considerable bulk, that we should endeavour to multiply them.'

The first definite description of the Dorking, or Darking, as it was then called, with details enabling us to recognise it, is found in Moubray's 'Practical Treatise,' which was first published in 1815 (4):

'The Darking fowl, so called from a town in Surrey, where probably the variety was first bred, and where, and in its vicinity, they are to be found in great plenty and perfection is, in the third degree, the largest of our fowls, well-shaped, having a long, capacious body and short legs, and is a plentiful layer. The genuine colour entire white; chief distinctive mark, five claws upon each foot. The white is probably not so pure as that of certain of the dunghill fowls, nor is the colour of the flesh, that inclining to yellow or ivory shade. The Darking are the species generally made into capons. In a large agricultural survey of the county of Sussex an attempt is made to deprive Darking of the honour of originating this famous variety of fowls, with what degree of success it would be a waste of time to inquire; it is sufficient we possess such a variety, and know where it is in perfection. The surveyor pretends that the Darking fowls are all raised in the Weald of Sussex, and that Horsham is the chief market for them; that their having five claws is not their true and original characteristic, such peculiarity being merely fortuitous, and, in fact, objectionable; and that those so marked are deemed a bastard breed. No doubt it is probable that having five claws accidentally brought into notice certain fine and well-formed individuals; but from those proceeded a distinguished variety, and that variety bearing the name of Darking,



seems a sufficient proof in favour of that town and its neighbourhood. In the meantime the appellation "Darking fowl" has been in use, I apprehend far beyond the memory of anyone now living; and it is not at all improbable the large Sussex breed has originated from a Darking cross, the peculiar mark of five claws employed, compared with that of the Sussex or common cocks, which were not so distinguished. Such is a common case in crossing varieties of live stock; the home variety in the end gets uppermost, as being in the majority. In fine, five claws form an original distinction in the common cock and hen, adverted to by Buffon; nor is there anything injurious or inconvenient in it, the fifth claw being seldom of sufficient magnitude to cumber the foot, or cause it to scratch out the eggs, as has been apprehended.'

What Moubray here says indicates that many facts have come to light since his time. We cannot accept that the name is sufficient proof of the breed having originated around Dorking, even though it shows that it was common in that district. There can be no question that formerly some of the finest Dorking fowls, as we term them, were bred in the Weald of Sussex. There is, however, other evidence to show that fowls of this type were not restricted to the South of England, for it is stated that in Cumberland birds having five toes, and with a square body, were bred there, being known as the Jew breed, and in other places as the Silver Pheasant breed, whilst in Scotland they were called the Old Scotch breed. As one writer in the *Gardeners' Chronicle* in 1848 stated: 'This Jew kind is said to be very ancient in Cumberland; and it is still very usual for the Lancashire men to carry off any fine birds of this race which they see among the mountain cottages. However, it would be a vain attempt to trace the origin of a breed which was accurately described 2,000 years ago by a Roman writer and, as Roman stations abound in Cumberland, it is quite possible that a poultry fancying prætor, more than 1,500 years since, might send or carry in the same year the first couple of Dorking fowls to the banks of the Thames, and to the old camp at Ambleside, or Castle Hill at Keswick.'

During the last three or four decades the Dorking has declined in popular favour both among exhibitors and those who produce chickens for the table, due in both directions to the advent of hardier races, and in the last named to competition of breeds which are more rapid in



growth. In spite of the fact that it has, in the main, suffered less from the extravagances of fanciers than have others, its loss of popularity for exhibition has been influenced by the lessened demand on the part of raisers of chickens for market. It is essentially the fowl for the home farms of country gentlemen, who are seeking first to meet the demands of their own households, and are not very particular as to commercial propositions and considerations. Fortunately, it is still to be met with in its original purity.

**Economic Qualities.**—Pre-eminently the Dorking is valued for its flesh properties. Whilst there is a considerable difference in the laying powers of the respective varieties, it has never been bred for egg-production. It produces large-sized, white-shelled eggs, and is an early layer, which is always a distinct advantage in the production of table chickens, for the reason that chickens can be hatched out early in the year. To breed specially for eggs would be a mistake, as this would be at the expense of the flesh qualities. The Dorking, by reason of its fineness of meat, the delicacy of skin, the whiteness of flesh and legs, and the abundance of muscle upon the breast or keel, is one of the finest table fowls that is known. Birds of this breed, however, do not need much fattening. When crossed with others they excel in this respect. Several breeds which owe much to the Dorking in their parentage look plumper than it does when fattened, though that does not apply so much in the case of younger specimens as in that of older birds. One great point to keep in mind, and it has not been regarded to the extent which might have been expected, is fineness of bone. In order to secure big specimens for exhibition, there has been a tendency to coarseness of bone, probably due to alien blood introduced with this object in view. Whilst there must be a substantial frame, at the same time coarseness of bone should be avoided. Bone is the most expensive part of the body to produce. The one great disadvantage which the Dorking has when bred pure is that it is unsuitable for heavy clay or damp lands. Under these conditions it does not thrive well. It needs a lighter, porous soil, yet one which is good in quality, as it should be given liberty to range.

**Description.**—From such evidence as is obtainable we may assume that the Dorking bred in the early part of last century and previously was, to a large extent, white in plumage, although there were other

colours. In an edition of Moubray's 'Treatise,' published in 1854, the white is stated to be the pure Dorking. The writer states that 'this, the pure Dorking breed, owing to the innumerable crosses to which they have been subjected, is now becoming exceedingly scarce, and can scarcely be met with beyond a very circumscribed area in Surrey.' This does not appear to be borne out by the facts of the case. It is of interest, in connection with the colour of the pure Dorking, to note that Columella said, speaking of fowls met with in Italy during his time, 'Let the white ones be avoided, for they are generally both tender and less vivacious, and are also not found to be prolific!' Many of the fowls of this type met with in Italy have been chiefly white in plumage.

Moubray's work (4) gives the following sub-varieties of what he calls the improved Darking :

- (a) Greys : speckled, spangled.
- (b) Reds : speckled or pied, pencilled.
- (c) Black-breasted : silver, golden, Japan.
- (d) Cuckoo-breasted.

In Ferguson's work (11) the Dorkings are divided into the following sub-varieties : white, coloured, grey, mottled-grey, spangled or speckled, brown, rubies, cuckoos, virgils, bride-laced, Japans, Norfolk-fords, grey fords and muffs. In respect to some of these we have not been able to obtain information. As no descriptions are given in the book referred to, it is impossible to say what these were like, more especially as the writer suggests that these were either cross-breds, or that the designations were purely localisms.

That there were many good Dorkings in the mid-decades of last century is undoubted. At the same time there was great uncertainty of type and colour. Mr. B. Allen, of New York, writing in the 'eighties of last century, said that 'I first visited England in 1841, and in looking over the poultry there, this bird (the Dorking) struck me as being the shorthorn of barn-door fowls—that is, the best for general purposes—and I resolved to take some of them back to America with me. I accordingly selected two cocks and half a dozen pullets, and got them safely to my farm in the State of New York. They were of brilliant







DARK OR COLOURED DORKING COCK  
(Bred by Mr. A. J. Major, Ditton, Langley, Bucks)  
1st Dairy Show. 2nd Crystal Palace

variegated plumage, chiefly brown-spangled and partridge colours of the darker shades, and the cocks black-breasted. They had shortish white legs, five toes, and both single and double combs; the bodies were pheasant-shaped, long, round, and full, with a deep breast, like a shorthorn ox; the head was fine, well set on to a small, clean, graceful neck; they were thickly-feathered, hardy and thrifty, steady sitters and careful nurses. Well fattened, the hens weighed 6 to 7 lbs. each, the cocks 9 to 10 lbs.; when caponised they came up to 12 lbs. They were the best table fowls I ever ate. They had white skins and flesh, with little offal.' He mentioned that some of the later importations into America were larger in size, varying in plumage from light or silver to dark grey, partridge colours to brown-spangled and almost black. Pure Whites were also imported.

The Dorking is another instance of the influence of exhibitions in bringing about greater fixity of colour, and, in older races, reduction in the number of varieties due to concentration upon certain types and variations. Since the rise of the show system many of the colours named above have disappeared. The general type has been well maintained so far as size and build are concerned. It may be pointed out that the same attention to coloration of plumage has never been given in the Dorking as in many other breeds, which has been a great gain. The main points of the Dorking are that the head shall be large; the neck thick, rather short, and with full hackle; the breast very full and prominent, with long, perfectly straight breast bone; the body large, square and deep; the back broad, rather long, flat on the shoulders, narrowing slightly towards the stern; wings large and well carried up; tail large and flowing in the cock, carried moderately up, and with long, broad, and well arched sickles; the thighs are thick and stout, covered by the feathers of the body; the legs short and strong, fine though soft in bone, and the feet large and broad, with five toes on each foot. In all varieties of Dorkings, without exception, the skin, flesh, legs and feet are pure white in colour, as are also the toe-nails; the beaks are white or light horn-colour. Weight: males, 9 to 12 lbs.; females, 7 to 10 lbs.

**Varieties.**—The origins of the different varieties of the Dorking have never been traced. Probably these were due to natural variations. Several of those mentioned in the 'fifties of last century are no



longer to be found. They were probably slight variations from the major types.

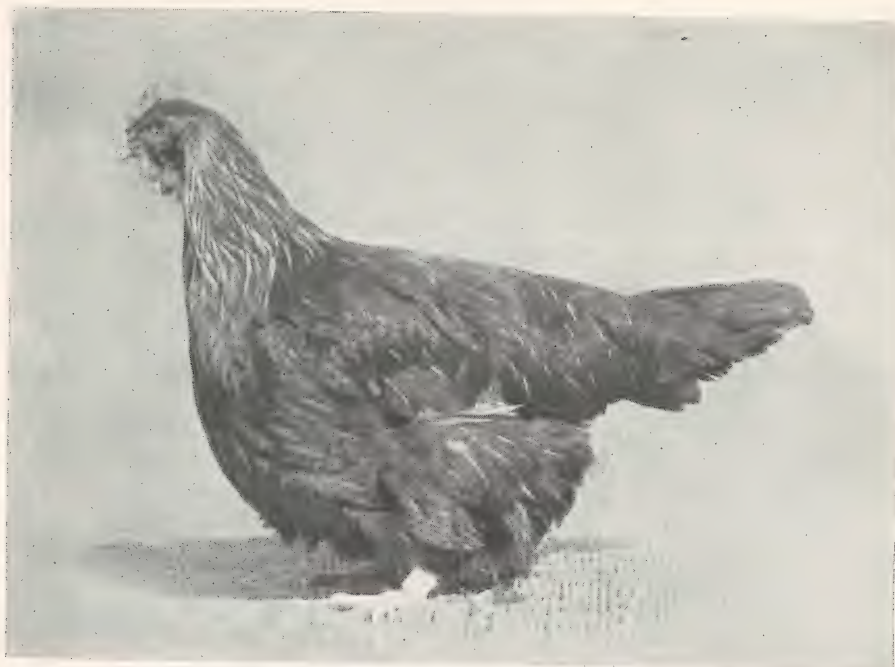
**Dark or Coloured.**—Older breeders often state that this variety was not a true Dorking. At one time such may have been correct. It is certainly not now the case. The Editor of the 1854 edition of Moubray's 'Treatise,' stated that the Black-breasted Dorkings were produced by crossing with Spanish, which is, to some extent supported by the testimony that about the time named Coloured Dorkings were decidedly flatter in front than we are accustomed to see. Evidence would show that the variety, as now known, was produced by the late Mr. John Douglas, then manager of the Duke of Newcastle's poultry yard at Clumber. No secret was made of the fact that a cross had taken place. Mr. Douglas selected hens of a grey and brown Dorking type. These were mated with a male imported from India. In later editions of Wright's 'Book of Poultry' (9) he gave the following particulars with regard to this bird :

'The bird was a model single-combed Dorking in all but the fifth toe, which was absent ; and it is quite wrong to say he was of the Malayan type, for there was not the least type of Malay about him ; he had white legs and all the characters of the Dorking, except, as before stated, the fifth toe. I firmly believe he must have been a cross from a bird of the Dorking tribe—taken out to India—with what cross I could not say, but certainly not the Malay.' There the question rests.

For many years the Dark Dorking was a coarser bird than has since been known. The advantages of the out-crossing were ultimately considerable. If less satisfactory the influences have been obliterated by selective breeding. This variety is the largest of the breed. It has never been rigidly bred for colour. Variations show a good deal of black upon a greyish-white or steel-blue background, and it has a black breast. The earlobes are red, though sometimes tinged with white. The appearance is very striking when viewed sideways, by reason of the square shape. It is, however, the heaviest in bone of all the Dorking varieties, respecting which special care requires to be taken. In flesh qualities, though larger, the Dark Dorking does not compare favourably with the Silver-grey, as the breast muscle is less abundant, and it does not fatten so well. It is, however, a valuable variety especially for crossing.







DARK OR COLOURED DORKING HEN  
(Bred by Mr. A. J. Major, Ditton, Langley, Bucks)



SILVER GREY DORKING COCK  
(Bred by Mr. A. J. Major, Ditton, Langley, Bucks)

**Red.**—At one period Red Dorkings were commonly met with in Kent and Sussex, but are less numerous, though there are a few breeders. One of these, Mr. Harry Hamlin, of Edenbridge, read a paper, July 29th, 1899, in which he said :

‘My recollection of these beautiful fowls dates back some thirty years, when my father, the late Mr. Henry Hamlin, of St. Piers’ Farm, Lingfield, Surrey, finding this good old breed becoming very rare, decided to carefully preserve them, which he did until his death, and which I have continued to do so ever since. One great point in favour of the Red Dorkings is that they have never been crossed with Asiatic fowls, which gives coarseness of bone, thick yellow skin, and looseness of feather. In viewing a pen of Red Dorkings the first thing that strikes us is the beautiful red hackles of the cock, his most compact shape and general absence of all coarseness. We also notice his well-formed single comb, which is smaller than the present-day Dorking, and which, with his face, earlobes, and wattles, are of a beautiful red. We notice that his breast and tail are black ; his legs are beautifully white, with some pink on the inside of the shank ; that the legs are very short indeed, and that he has five well-developed toes on each foot. If you take the fowl in hand you will be astonished at the weight, owing to the great quantity of meat on the breast.’

Respecting this variety the late Mr. Harrison Weir wrote (13) : ‘The Red Dorkings were at one time common in Kent and Sussex, and are not a new breed as some writing on the subject have stated. The Reds are mentioned by almost every writer for over 300 years as the best of all. They were quite common fifty years ago. The late Mr. Hamlin, liking their appearance, kept them pure, and those I had were the descendants of them. Kept pure by his sons—Mr. Hamlin, of Highfield, Speldshurst, Kent (selecting his more for the lacing), and Mr. Harry Hamlin, of Haxted Mill, Edenbridge (selecting his more for the richness of the red colour)—I had a very fine Black-breasted Red cock from him a short time ago. These birds are the old Kent and Sussex five-toed breed, and their crow has the ring of that we used to hear around our homesteads fifty years ago and more.’ Mr. Hamlin emphatically repudiates the suggestion that the Red Dorking is related to the Red Sussex. It is deeply to be regretted that breeders in the two counties named have not given greater prominence to this variety.



**Silver-Grey.**—This can reasonably be claimed as the handsomest of the family. Its beautiful gradations of colour in both sexes (in which respect it differs from the Dark, as the hen of the last named is very homely), its conformity of size and shape, the compact yet substantial build of body, the pure whiteness of legs and feet in the best specimens, offer an attractive combination. For many years the efforts of some of the most skilful breeders were devoted to secure its perfection. That present day specimens are vastly superior to those seen half a century ago is evident. This has not been at the expense of size or flesh qualities, for the birds are as large, if not larger, are equal in meat properties, and there is no evidence of coarseness of meat or of bone.

The Silver-grey is fine in flesh and bone. Weight is not in itself a determining factor. The relative weight of flesh, bone and offal must be considered. It is in this direction the Silver-grey excels. The French, who are nothing if not practical, prefer this to any other Dorking. It, or the related breeds of the same type, has had considerable influence in forming some of the breeds which are specially favoured across the English Channel. The French look to quality rather than size. As already indicated several of their finest races are not very heavy when in ordinary condition, but lay on a large amount of flesh when fattened.

The Silver-grey Dorking excels as a table fowl. Fineness of bone, delicacy of flesh, and large proportion of breast muscle, have won for it one of the first positions among domestic poultry. The hens are by no means to be despised as layers. Whilst they do not equal some other races in the number of eggs produced, they are early layers—a most important point both for market supplies and hatching of early chickens. The eggs are large, white in shell, and of excellent flavour. Whether there is any correlation between egg and meat flavour has never been tested.

**White.**—That the original type of Dorking was frequently white in plumage may be generally admitted. It was, however, overshadowed by related varieties until resuscitated by exhibitors. It differs distinctly from the other varieties in having a rose comb. We find, however (7) that this was by no means a fixed character in the earlier part of last century. Further, it does not present the same





*Photo, C. Hosegood*

LIGHT SUSSEX COCK

(Bred by Mr. A. J. Falkenstein, Rotherfield, Sussex)

First Prize Crystal Palace Show, etc.



square appearance, more of the thighs being seen. That there has been a cross would seem to be apparent. It is pure white in colour of plumage, and upon lawns or grass is very beautiful. It is essentially an ornamental variety.

**Cuckoo.**—This is a variety of Dorking which has now and again attained a measure of attention, but thus far has not won much favour. In it the plumage has a light bluish-grey ground, each feather barred across with darker grey or blue, and uniform throughout, both in cocks and hens. It is a hardy variety, one worthy of development.

### SUSSEX.\*

Nomenclature : in all countries, Sussex.

Varieties : Light, Red, Speckled, Brown, Buff, White.

Classification : Table, Exhibition.

Colour of Flesh and Skin : White.

Colour of Legs and Feet : White.

Colour of Egg-shells : Tinted.

One effect of exhibitions and of laying trials is to aggrandize the position of a few breeds and varieties of poultry, and to depreciate those which are known to a lesser extent. Experience has shown, however, that the efforts of a few determined breeders can, as a rule, give prominence to any breed, if it has qualities of value, and that, wanting the advertisement afforded by classes at shows and sections in laying trials, a breed either passes into oblivion or has a very limited number of supporters. Such efforts, however, fail to have more than a temporary influence in the absence of economic or profitable qualities. To the lack of advocacy and push may be attributed the overshadowing of the Sussex by the Dorking for a long period of time. During the latter half of the Nineteenth Century it had almost disappeared. A few breeders, however, retained the breed upon which present-day developments have been erected.

Such was the position in 1903. In the early part of that year the Author, in addressing a meeting of Sussex farmers at Lewes, made reference to the fact that whilst the county had the reputation of producing some of the finest chickens for the table as a result of their methods of preparation and fattening, they had missed a great opportunity in practically allowing their native Sussex fowl to die out. We

\* Plates XXXIX to XLII, and LXIX.

called attention to the fact that Sussex farmers had maintained their distinctive breeds of cattle and sheep, and stated that if they had also maintained a race of fowls with the special qualities for which the old Sussex breed had been famous, a demand for these stock birds could not fail to be highly remunerative to them. In response some of those present, including the late Mr. E. J. Wadman, a large and well-known farmer, stated that for several decades on his farm had been maintained pure Red Sussex, which were fine in flesh qualities and excellent in type. The challenge thrown down that steps should be taken to resuscitate the Sussex breed was at once accepted, with a result that on the 23rd of July in the year named the Sussex Poultry Club was formed, and has had the effect of securing for this fine race the prominent position it now occupies both for exhibition and production. That is one of the most influential specialist clubs in Great Britain. It may be explained that the term 'Sussex' or 'Surrey' fowl, applied to dead table poultry, refers to the methods of fattening and shaping, and not to the breed.

**Origin.**—As in the case of the Dorking the foundations of the Sussex fowl are difficult to trace. All the probabilities are that the two breeds were the same. As already seen in connection with Dorkings, many varieties were included under the generic terms which are now unknown. In the early part of last century the great agriculturalist Arthur Young made a distinction between the Sussex and the Dorking, for he says (14) :

'The Dorking fowls, as they are called, are all raised in the Weald of Sussex; but the finest market for them is Horsham. The five-clawed breed have been considered as the best sort; this, however, is a great mistake, as it took its origin in some fowls with this peculiarity that happened to be very large and fine, which laid the foundation of what have been since called the Dorking, or five-clawed fowls, and considered in other parts of England as the prime stock, but such a thing is hardly known in Sussex; it is a bastard breed. The fowls at Lord Egremont's table, of the Sussex breed, have very frequently astonished the company by their size.'

Arthur Young did not describe the Sussex fowl of his day. The opinion here expressed is controverted by Bonington Moubray (4) as already quoted. All the evidence goes to show that the Dorking has







LIGHT SUSSEX HEN

*Photo, C. Hosegood*

(Bred by Mrs. Morris, Blewburton Hall, Aston-Tirrold, Berks)

a much longer ancestry than suggested by Arthur Young, and that the five-toed birds have been known for centuries. It is most probable that the Sussex had been derived from the same source, in which latter selection had been of birds with four toes.

We have already seen that speckled fowls were included by Moubray, Ferguson, and others, as sub-varieties of the Dorking. Other evidence would indicate that birds characterised by that colour of plumage were widely distributed. Personal observations over the greater part of Europe have shown that fowls with speckled brown feathering are general, and that the common fowls (*Anglice*, barn-door ; *French*, poule commune) usually follow the original colour which is largely brown, many of which show specks or splashes of white. That the present-day Sussex owes something to other blood is indicated by the fact that these birds generally lay tinted-shelled eggs.

**History.**—In a little work, undated, which was published in the 1850's, it is stated (15) that 'the varieties of Dorkings in which the fifth toe is absent are known as Sussex or Surrey fowls'; and G. Ferguson says: (11) 'Old Sussex or Kent fowls are closely allied to Dorkings, and bear strong affinity to them; in fact in many instances detection is impossible. The original birds bred in Sussex and Kent, were longer in the body, and, moreover, possessed but four claws, but being, in many instances, blended with the Dorking and crossed, may be seen with four or five in the very same clutch or hatch. . . . For weight, flesh and early maturity, they are equal to the true Dorking, and may be regarded as no less valuable as marketable fowls. They possess their principal characteristics in feather and general appearance, there being all colours, all shades, and an innumerable diversity.'

The well-known artist, Mr. Harrison Weir, who was for upwards of sixty years a breeder of poultry, wrote that 'the Surrey or Sussex fowl was generally of a grey colour, often a sandy brown, like a black-red Game hen. I have put the colours in the order in which they were most admired, and in which size was generally to be found. They were large, strongly made, sprightly, good flyers, excellent foragers, and fair layers of large white eggs; their legs and feet were of a clear, soft-looking, pinky-white; breast more broad than deep, with much flesh, and also good on the thighs, etc. They were very close in feather, thereby not looking nearly the size they actually were. Some of the



breeds were bearded, and these were somewhat smaller. I never remember seeing any with top-knots. The combs were single, and the earlobes a pinky-white, like the true Dorking.' Mr. Weir adds that the majority were four-toed. No mention is made by him of the speckled variety.

In a government Report (16) dealing with the Heathfield district of Sussex, Mr. Haviland, of Warbleton, Sussex, says 'I cannot help remarking what a great pity it is that the old Sussex fowl, as it used to be found in the district around Heathfield and Warbleton some fifteen to twenty years ago, is being allowed to die out. As a table bird and as a breeder of birds for the table it was almost perfect, with its small white legs and heavy body, with good breast meat. It may not have been a prolific layer, but was very hardy, the chickens coming to maturity early, and being easy to rear in the early months of the year. In colour, no doubt, it varied a good deal, the hens being most speckled or brown, and the cocks either grey or red, with long single comb. I have no doubt it was to this good old breed that Sussex owed her reputation for sending good chickens to the London Markets.' As we have already seen, eight years after the above statement was made, steps were taken to resuscitate this breed.

Whilst the original colour of Dorkings was largely white, it appears that the variations induced were due to mixing with the common fowl met with in South-eastern England, and also to infusions of Game fowl blood, that the Sussex have descended from the mixed races, and that by selection such variations were fixed. Also that the five-toed became the present day Dorking, and the four-toed the Sussex. Further, that the Surrey fowl, so called, became the Dorking, and the Sussex (including the Kent fowl) is that which we know under this cognomen.

Mr. Lewis Wright speaks (9) of the Surrey fowl as 'a kind of Dorkingised barn-door,' and also states that the old Surrey fowl 'was one parent of the Dark Dorking.'

**Economic Qualities.**—Sussex fowls are not so heavy in the body as are the Dorkings, or so short in the leg. That is a decided advantage, in that they are not so expensive to rear, and are ready at an earlier age. Like the French Bresse, the premier table fowl on the Continent of Europe, they fatten well, laying on a large quantity of flesh if the right method of feeding is adopted. They are light in bone,







BROWN SUSSEX COCKEREL  
(Bred by Mr. Chas. Hardy, Argos Hill, Rotherfield, Sussex)  
1st and Special Dairy Show



BROWN SUSSEX HEN  
(Bred by Mr. Chas. Hardy, Argos Hill, Rotherfield, Sussex)  
2nd at Royal; 1st Hailsham; 1st Crystal Palace

*Photos, C. Hosegood*

a point of great importance to secure early maturity. Bone takes longer and is more costly to produce than muscle. The flesh is beautifully white, juicy and excellent in flavour. That fact, combined with the white legs and feet, makes them specially desirable for the production of chickens for market. They are active, hardy and easily reared.

Although primarily regarded for their flesh properties the Sussex fowl has proved, more especially the light variety, to be an excellent layer, in fact, so much so that at several of the leading Laying Trials separate classes are provided for the breed, in which excellent records have been made. At the Harper Adams Trials of 1925-26 a breed average of 146.9 was obtained from 126 pullets competing. Several laid over 200 eggs in the forty-eight weeks, headed by one which laid 242 eggs during the trials. How far this can be carried without adversely affecting the table qualities remains to be seen. This point is brought out in a recently published brochure on the breed, namely (17) 'if the breed lies in danger at all, it is from the fact that it is an admirable layer, so much so that there are few commercial egg farms or Laying Tests complete without their representatives of the variety. Thus, by encouraging eggs alone to the exclusion and detriment of the table qualities, a small, high-tailed, cobby type of Sussex may abound, which being singularly devoid of both chest and hackles and laying a small egg, may give the breed a bad name.' Of what is here stated there are distinct evidences. The remarkable fact is the adaptability of the Sussex under very divergent conditions, which may arise from its hardihood, having been raised for generations on the grey clays of the Weald of Sussex, where there is considerable exposure. It is widely distributed, more especially the Lights, in almost all parts of Great Britain and Ireland. It may in this way fulfil an important function in raising the meat properties of farm and other fowls over the entire country.

**Description.**—Bred pre-eminently for meat properties, the Sussex is a deep-bodied fowl, without, however, the same appearance of size as in the Dorking, more especially in the hens, either in length, depth, or width of body. It is lighter in bone, and does not carry so much feather, nor is it so large in comb. The breast is broad in front, which should be carried well forward, the keel, and therefore the body, being



deep. The shoulders are wide, the back broad and flat, tapering somewhat towards the posterior. The head is medium in size, with short, strong and curved beak. It is surmounted by the medium-sized single comb, erect in both sexes; eyes full and bright; face, comb, wattles and earlobe, red. The neck is medium in length, gracefully curved, with fairly full hackle. The tail is medium in length, usually carried at an angle of 45 degrees, and the wings are held closely to the body. Legs and thighs are stout, without being heavy, are short and wide apart, with four toes on each foot. The legs, feet and toe-nails are white; the skin and flesh are clear white in colour and fine in texture. Weights: males, 9 lbs. and upwards; females, 7 lbs. and upwards.

**Varieties.**—As a result of the formation of the Sussex Poultry Club and the extended breeding of this type of fowl considerable changes have taken place. It may be accepted that the Speckled and the Red or Brown were, more or less, the originals. These have not, as was anticipated, taken the prominent position of the Light Sussex, probably due to the absence of colour complications in the last named, and to the fact that it has proved to be more adaptable to different conditions.

**Light.**—In his work on the Sussex Fowl, Mr. S. C. Sharpe, who was for several years Secretary of the Sussex Poultry Club records that (18) many years ago white-plumaged birds were commonly seen on farms in Sussex, as these were found to be hardy and quick growers. He says that ‘The foundation of the Lights—I mean the predominating blood of this bird—was Brahma, Cochin and Silver-Grey Dorking, and this is all proved by the feathers on leg and the colour of the Brahmas, the yellow and sapphires from the Cochin, and the five toes from the Dorking.’ What is here stated is proved by the prevalence of feathers on the legs and five toes among the Light variety during the years after breeding was taken up on systematic lines. These have been to a considerable extent bred out. At the same time they are by no means uncommon even in the best stocks. The fact must be recognised that the Light Sussex is a composite variety in which the breeds named above have materially contributed to its qualities which have won for it so prominent a position, not alone for flesh values but for its productiveness in respect to eggs and its vigour of constitution. The





BUFF SUSSEX COCK

(Bred by Mr. J. Raine, Fawkham, Kent)



BUFF SUSSEX HEN

(Bred by Major Martin, Boreham Manor, Warminster, Wilts)

*Photos. A. Rice*



ground colour of plumage is pure white throughout. On the head and neck hackle each feather has a black centre with white margin; the wings are white with black flights; the tail black; eyes orange. The only difference between the two sexes is that the tail coverts of the cock are also black. Mr. Clem Watson calls attention to the fact that (18) 'The greatest defect in a Light female is undoubtedly lack of shape, and too much emphasis cannot be laid upon this. A cobby bird like a Wyandotte is not wanted, nor one which is lacking in colour. . . . Perhaps the worst blemishes of all in males are a blotchy hackle feathering, generally accompanied by a washy grey near the roots, and body feathers spotted with black.'

**Red.**—This colour in any fowl is very attractive, and presents many opportunities for exercise of skill in the breeders. At the same time it involves risks of sacrificing economic qualities for perfection of colour. Two important points are the oblong formation of body, and pure white legs. The body colour in both sexes is a rich dark red throughout; head and neck hackle also of that colour is striped with black; wings have black in flights; tail black, the tail coverts in the cock being dark red; eyes red. Some hens show peppering in the feathers on the back, which is undesirable.

**Brown.**—In colour this variety is less attractive than the Red in that they have a duller tinge. It is, however, one of the best of the family for economic qualities. The hens are excellent layers of large, brown-shelled eggs. The meat properties are very high, both as to distribution and quality of flesh. Fully matured males have weighed as much as 12½ lbs. There is, however, a danger in too large a frame which is not economic, and is apt to tend to coarseness. In both sexes the beak is dark or horn-colour, and the eyes brown or red. In the male the back and wingbow are dark mahogany; the head, neck hackle and saddle hackle are dark mahogany, striped with black; the wing coverts are blue-black, the wing secondaries and flights are black, edged with brown; breast, tail and thighs, black. In the hen the back and wings are dark brown with fine markings; breast and underparts are pale wheaten brown; wing flights black, edged with brown; head and neck hackle, brown striped with black; tail black. The chief danger is that the standards for males and females are not compatible, and that if maintained double mating will be resorted to, which is

fatal to the permanent popularity of any breed. As a consequence the latter should be made less rigid. It would be to the advantage of this variety if only the males were exhibited, otherwise the history as in other breeds will be repeated, that is, loss of the inherent economic qualities. It is too valuable a fowl to be sacrificed in this manner.

**Speckled.**—We have already seen that speckled fowls are to be found in many countries. That was so in Sussex and Kent generations, perhaps centuries ago. The records available show that in both counties birds of this type, some with five, others with four toes were known under different names. In the early years of the present century, and when the Sussex Poultry Club was formed, the Speckled variety were regarded as the most typical and more numerous than others. At that time it seemed as if it would be dominant in the future. Such has not proved to be the case, probably due to what have been termed colour complications. Perhaps it may be that in striving to improve the exhibition characters, which has been done with great success, the other aspects have been neglected. Moreover, the Light variety has been more responsive in respect to egg-production. Fortunately there has been no sacrifice of flesh properties. Birds of this hue vary greatly. Mr. Sharpe says (18): ‘I have seen Speckled of all colours and types, yet many of them even then coming pretty true to markings and level in colours. I have seen, too, in the early shows, Speckled Sussex hens and pullets varying from light fawn ground colour to almost jet black. Some would be covered with large white spots and splashes of black, with little or no brown, and in the next pen we would see a light brown ground work with hundreds of tiny little white spots and no black at all. The cockerels would have no even markings except upon the breast, and the tail and flight feathers would be quite white, so from this one can gather what a variety of colours could be seen at some of the first shows where classes for the Sussex were put up.’

Mr. Clem Watson thus described the coloration of this variety (17): ‘Each feather on a Speckled male should have a clean white spot at the tip, then a broad bar of glossy black, the rest of the feather being rich dark mahogany. The under colour should be slate and red with a minimum of white, and the flights in both male and female white, brown and black. The tail in the hen should be black







BUFF ORPINGTON COCK.

(Bred by Mr. W. J. Golding, Bowens, Penshurst, Kent, Sec. of the Buff Orpington Club)

and brown with a white tip, whilst in the cock the main tail feathers should be black and white, and the sickle feathers black with white tips. The wing bow in the cock should be speckled (i.e. a mixture of brown and white feathers), and the neck and saddle hackle feathers rich dark mahogany striped with black and tipped with white. . . . In the females the rich dark mahogany ground colour is most essential, and yet it is most difficult to obtain, because with the black bar dividing the white from the red there is always the tendency for the main part of the feather to show black or peppery marking.'

**Buff.**—This is the most recent variety of Sussex to be introduced. It has, however, distinct possibilities by reason of the self-coloured plumage. It is confessedly due to the crossing of Buff Orpington with existing varieties of Sussex. The affinity between the two races is very close in respect to flesh qualities and coloration of flesh, skin and legs.

**White.**—Since the above was written a White Sussex has been introduced, one with great promise.

### ORPINGTON.\*

Nomenclature : Orpington in all countries.

Varieties : Black, Buff, White, Spangled.

Classification : Exhibition, General Purpose.

Colour of Flesh and Skin : in Blacks, grey ; in other varieties, white.

Colour of Legs : in Blacks, black ; in other varieties, white.

Colour of Egg-shells : Medium-brown.

**Origin.**—It is necessary to deal separately with the different varieties known under the name Orpington from the fact that some had a totally different basis from others. The plasticity of the domestic fowl is evidenced by the bringing of divergent characters into unison.

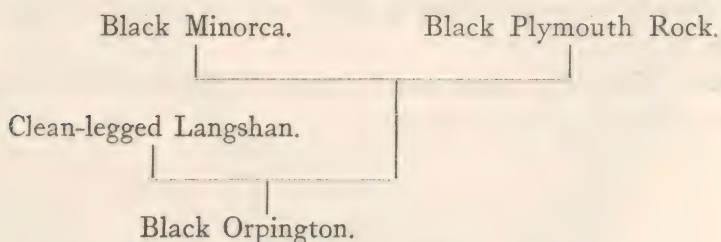
**Black.**—This variety was originated by the late Mr. William Cook, at that time living at Orpington, Kent. He gave that name to the new fowl, as he had a perfect right to do. The process of evolution was thus described by him (19) :

'I commenced mating Minorca cocks with Black Rock hens, then Langshan cock to the above hens, (evidently the half-bred Minorca-Rock hens.) I may mention that I used birds which exhibitors would

\* Plates XLIII and XLIV.

have termed useless—Minorca cocks with red in their earlobes, which caused them to be useless for breeding pure birds ; the black Plymouth Rock hens thrown on one side by exhibitors as being sports only from the grey ; and the clean-legged Langshans, of no use whatever to breed birds such as were required by the standard of the Langshan Club at that time. Such birds as these were put on one side for laying purposes or for the pot.’

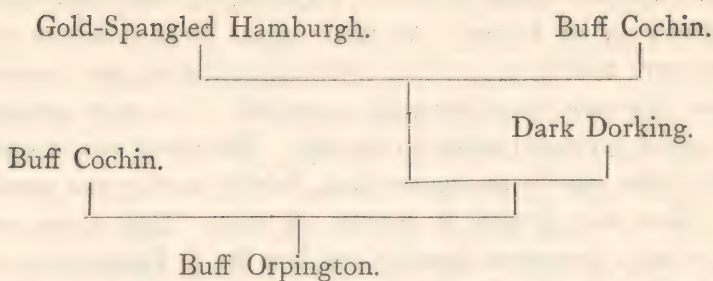
Mr. Cook claimed that these rejected specimens were the best layers, and that the mating produced a finer fowl than any of the parents. The combination resulted in a large, useful fowl, specially suited for residents in towns and manufacturing districts. The following chart shows the descent of the Black Orpington :



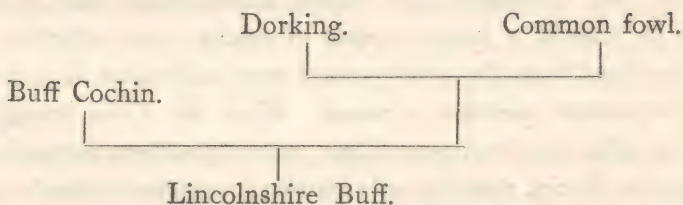
That all Black Orpington were the result of the crosses named was not the case. Breeders other than Mr. Cook tried various crosses, of which there are no records. Quite early there was an infusion of Black Cochin blood, as indicated by the shape and by the recurrence of hock and leg feathers. It may be assumed, however, that the four breeds named above were chiefly used in founding the Black Orpington.

**Buff.**—The origin of this variety has never been satisfactorily decided. That it owes its popularity in the first place to the late Mr. William Cook, a man of striking personality, and who did much to encourage Poultry Husbandry more especially among smaller producers, in which he attained great success. To him the Buff Orpington owed its popularity, plus its economic qualities. He claimed that he had originated it by an admixture of Gold-spangled Hamburgs, Dark Dorkings, and Buff Cochins, the descent being as follows :





It is of interest, however, to note that a very similar type of fowl had been in existence for a long period of time in the county of Lincoln, more especially in the Spalding, Boston, and Louth districts, under the local name of Lincolnshire Buff. These were, however, more of the Cochin type, and had not been carefully selected, except in a few instances. The majority had leg feathers, but, as a rule, were white skinned and legged. It was stated that these had been evolved as under :



In the Buffs, also, a large number of breeders formed their own matings, as a result of which there was great divergence in type. At the same time the Lincolnshire Buff was bred more carefully, and undoubtedly formed the basis of a large number of the strains which entered into rivalry with the Orpington bred birds.

Whites were at one time said to have been produced by the crossing of White Leghorn, White Dorking, and Black Hamburg. It is generally admitted to be a sport from the Black, probably with an infusion of Sussex or Dorking blood.

Spangled and what are called Jubilee Orpingtons have been introduced, and are bred for exhibition to a limited extent in England.

**History.**—The Black Orpington was introduced in 1886. A black-plumaged fowl, it had special recommendations for residents in sub-

urban and manufacturing districts. Its hardihood and useful qualities were greatly in its favour. At that period large numbers of new breeders were taking up poultry both for exhibition and production, to whom this new breed strongly appealed. The very uncertainty of type which prevailed added to the zest. The breed was brought out whilst its type was by no means fixed, hardly worthy the name of a breed. That was altered in process of time. Then came another change, when a prominent breeder, the late Mr. J. Partington, crossed the Black Cochins with it and gave it a distinctive Cochins character, except that the feathers on the legs were eliminated. He also secured greater brilliancy of plumage. In doing this the productive qualities were sacrificed to some extent. As a result its general popularity declined, and that reacted upon its success for exhibition. The Black Orpington has lost the position it once held.

With regard to the Buff variety a fierce controversy arose, not in respect to its characters or qualities but to the name. Apart from all questions as to the claims put forward with regard to the origin, whether the Buff Orpington is a refined Lincolnshire Buff, as would appear to be true in a large number of stocks; and whether birds identical and bred from the same parents were sold under both designations, an important question is raised. When Mr. Cook brought out the Buffs in 1894 the Orpington Club, which has been formed in the interests of the Blacks, then the only variety, protested strongly against the use of the name Orpington for the new and unconnected variety, and others did the same. The question was ably summed up by the late Mr. Lewis Wright (20):

‘A breeder might justifiably use any name he likes really open to him; but when a man has already appropriated the name of his own residence to one breed, of which he tells us the components were A., B., and C., there are the gravest objections to his giving, years afterwards, the same name, for merely trade and advertising purposes, to another “breed,” which, according to his own account, has no particle of A., B., and C., but was built up of X., Y., and Z.’

That the name had a great advertising value was abundantly proved. The English Poultry Club, however, failed lamentably by recognising the new breed under the name of Orpington. A grave injustice was done to Lincolnshire breeders, as the advantage they



would have reaped went elsewhere. Fortunately, 'a rose by any other name would smell as sweet.' The economic qualities of the Buffs won for it great popularity in many countries. It attained a wide measure of favour. Large numbers of half-bred Buff Cochins and Dorkings were sold as Buff Orpingtons, many of which were yellow-legged and feathered on the legs. Anything bearing the name 'Buff Orpington' was saleable. As a Lincolnshire breeder wrote us, 'If I call my birds Lincolnshire Buff, I cannot get more than 4s. each for them; if I call them Buff Orpingtons, they sell readily at 10s. each.'

During recent years the Buff, like the Black, Orpington has fallen from its high estate. At one period the classes at exhibitions were the most numerous. Then the variety was widely distributed among producers, by reason of the laying and flesh qualities. In neither direction is that now the case. Exhibitors have sacrificed the compact shape and the close feathering which formerly characterised the Buffs, and turned it into a short-legged race, with a mass of loose feathers. The striving for buff to the skin is against nature, and proved most harmful. Further, it has lost some, at least, of its productivity and flesh quality. What is here stated is being recognised, and efforts made to retrace the methods adopted with such disastrous results.

**Economic Qualities.**—Exaggeration of characteristics and qualities is usually met with on the introduction of any breed. No one has suffered more in that respect than the Orpington. If a tithe of what has been said respecting it were true it would deserve canonisation. Such statements are misleading. The devotees, however, of almost every new breed appear to be subject to the same contagion, which is generally that of infancy when the effects of crossing and at change of conditions are very powerful. Breeds must be judged practically, and their qualities carefully and impartially considered in the light of experience.

The Black Orpington is a big, bulky fowl; hardy, yet not very rapid in growth, as it is somewhat heavy in bone. It carries a fair amount of flesh, which is greyish-white in colour, is fine and delicate in skin. There is too much muscle on the thighs to be regarded as a first-class table fowl, though that flesh is juicy and superior to what is found on more active birds. The bird fattens well. Its grey flesh does



not recommend it on the best markets. The hens are good layers, especially in winter, and the eggs are medium in size and tint of shell. For general purposes, and especially where kept in towns and manufacturing districts, the black plumage is a great recommendation. All varieties of Orpingtons are good sitters and mothers, too much so where eggs are the chief consideration.

Buff Orpingtons offer a combination of qualities rarely found, namely, white skin and legs and the production of tinted-shelled eggs. To that was due its rapid growth in popularity. These birds are hardier than are most of the white-legged races. The amount of yellow blood in their composition enables them to withstand the effect of heavier soils. They, however, grow more rapidly where the ground is porous and dry. The chicks grow faster than do the Blacks, as they are lighter in bone. The flesh upon the body is well distributed, chiefly upon the breast, where it is thick and plump. It is good in flavour, the birds fattening well, and the fine skin tightly filled is very attractive, though the body is somewhat short. The hens are excellent layers, and if hatched early are very productive in winter. The combination of qualities is one which ought to be preserved and perpetuated.

Whites and Spangled, and also the Cuckoos and Jubilee, are bred for exhibition and have not many supporters. At one period the White was very popular in America. That is no longer the case.

**Description.**—In appearance the Orpington is a large-bodied fowl, standing on rather short legs. The body is broad and deep, the breast carried well forward, with a breast bone of moderate length; the shoulders are broad, and the back short and curved; the wings are rather small, and carried close to the body; the head is small and neat, the beak strong, and the comb of medium size—where single carried erect in both sexes, where rose set close on the head; the wattles are medium in size and round, and the earlobes red; the neck is gracefully curved, and covered with a full hackle; the tail is of medium length, with well curved sickles in the cock and carried well up in both sexes; the thighs are short, as are the legs, which are strong in bone; four toes on each foot; there should be no sign of feathers on the outside of legs and feet; the whole aspect is that of a short, compact, cobby fowl. Weight: males, 9 to 10 lbs.; females, 7 to 8 lbs.





*Photos, A. Rice*

WHITE ORPINGTON COCK

(Bred by Mr. W. M. Bell, St. Leonard's Poultry Farm, Ringwood, Hants)



BLACK ORPINGTON PULLET

(Bred by Miss N. Shanks, Stetchworth, Newmarket, Cambs.)  
 Champion Dairy Show; 1st Cup and P.C. Cup; Best Pullet



**Varieties.**—Black has greenish-black plumage, with a bright sheen ; beak is black, as are the legs and feet ; the eye is black with a dark brown iris ; the comb, wattles, face and earlobes red ; combs are generally single and medium in size. A rose-combed variety is bred to a limited extent.

**Buff.**—The colour varies considerably from a lemon to a deep buff, usually deeper in the males. The standard calls for even buff throughout to skin which, as already indicated, is abnormal and has been proved undesirable. Originally black feathers were found in the tails of both sexes. By careful selection the tails are usually pure buff. That, again, is a mistake. Black-tailed specimens are in almost all cases the more vigorous and the better layers. White feathers often appear in the wings, to which there is always a tendency, owing to the fact that buff is not a natural colour for fowls. The beak is white or pale horn colour ; the eyes red or brown, the red preferred ; the comb, wattles, face, and earlobes, red ; the legs and feet as pure white as possible. The great mistake made by exhibition breeders has been to increase the cushion and feathers and to make the legs too short for the size of body. There should be daylight between the legs and compact plumage.

White Orpingtons whilst maintaining the general characteristics of the breed are generally somewhat more upright, often with apparently longer legs. The plumage is pure white, as is the beak.

Spangled follow closely after the Spangled Game, which probably were used in producing this variety. The ground colour is black with white spangles, the tail black and white, and the hackles black with white tips ; the legs and feet are mottled black and white.

**Jubilee.**—In this variety the ground colour is mahogany, with black markings and spangles, in some cases with white tips ; the tail is white or black and white.

**Australorps.**—The fowls to which this name is given in Britain are very nearly the type of the original Black Orpington. In Australia the racial characters were maintained as at first introduced, whereas in Britain that variety was, as we have already seen, Cochinese. When brought over to Europe a few years ago the name here employed was applied to distinguish them from those which had been so markedly changed. They are regarded as the true Black Orpington.

At the Antipodes these birds have proved to be prolific layers, as has been the case in Britain. To a considerable extent they have displaced the so-called Black Orpington.

### HAMBURGH.\*

Nomenclature : *English*, *Hungarian*, *Hamburgh* ; *French*, *Hambourg* ; *German*, *Dutch*, *Hamburger* ; *Danish*, *Hamborgerne* ; *Italian*, *Amburgo* ; *Spanish*, *Hamburgo*.

Varieties : Gold-Spangled, Silver-spangled, Black, Gold-pencilled, Silver-pencilled.

Classification : Exhibition, Non-sitting.

Colour of Flesh and Skin : Grey.

Colour of Legs and Feet : Leaden-black in Black ; leaden-blue in other varieties.

Colour of Egg-shells : White.

**Origin.**—The varieties of *Hamburgh* fowls, as known to-day, are traceable to two distinct sources. The two Spangled and the Black varieties were evolved in Britain, and have been bred in the North of England for more than two centuries. The Pencilled varieties came from the Netherlands. These have been altered considerably since they were introduced.

The first mention, however, which has been traced of a fowl bearing any resemblance to the Spangled *Hamburgh* is found in Italy. The great Italian naturalist, *Aldrovandi*, has left in the museum bearing his name at the Bologna University, which we have visited, a remarkable collection of works and drawings. In the first volume of his great book, published in 1599, a class of fowl is described which he called ‘*Turkish*,’ and which has many resemblances to the Spangled *Hamburgh*, more especially in markings and colour of plumage. The illustration in that work has had more to do with recognition of the so-called *Turkish* fowl than the letterpress. In respect to the comb, the resemblance is remarkable. Not only is it what we call ‘*rose*,’ but the spike behind is prominent. As this peculiarity is not seen in any other race which has been traced, it may be assumed that all the *rose-combed* fowls are descended from those described by *Aldrovandi*, although there is no other evidence in support. Why he gave them the name of *Turkish*, or how they passed to Britain and Northern Europe, is buried in oblivion. *Ferguson* says (II) that ‘*Hamburgh* appears but the medium by which they were originally imported (in the way of commerce) into this country from Turkey or some other Eastern climate,’ but gives no evidence of the importation. We have not found

\* Plates XLV. and XLVI.



that birds of this type are met with either in Asiatic or European Turkey. The description given by the same author from Buffon resembles the Hamburg only in name, whilst the quotation from Chaucer's 'Nonne's Preeste's Tale' needs a powerful imagination to connect it with that breed. In fact, it is evident that the earlier writers confounded it with the Polish, as both crests and tufts are referred to. Dickson states (21) that 'the Hamburg is evidently a variety of the Paduan (Polish)', and the same opinion is evident in the earlier editions of Moubray. These references do not appear to be connected with the Spangled or the Black Hamburg. Mr. Harrison Weir suggested (22) that the Spangled Hamburg was produced by crossing the old Spotted-breasted Game with the Dutch Everlasting-Layers. He, however, offers no evidence in support.

So far as the Pencilled varieties are concerned, we are on more sure ground. In the fifth edition of Moubray's work (1820) it is stated (4) that 'There is a small variety now imported from Holland, called Every-day hens, which are ever-lasting layers.' Many references are made in older books and publications to fowls under this or similar terms. The best we have come across is by Mr. B. P. Brent (23) in which he says that 'the Dutch Every-day Layer' is widely spread over England, and is much esteemed for the production of eggs. It has been long known among us, and various districts have various names for it. . . . These fowls are rather small, but neat and nicely made; they have rose-combs, which should terminate in a single point, directed backwards. . . . They are the best sort for laying I know of, though their eggs are smaller than of some other kinds—still, not smaller than those of the generality of common fowls. It is very rare for true birds of this breed to want to sit, but they continue to lay throughout the summer; from this reason, and also that they are imported from Holland, they have received the name of 'Dutch Every-day Layers.' He further names what he regards as a cross between them and the Spanish, of which 'some are single-combed, but most of them have a peculiar shaped comb, appearing like two single combs united at the extremities,' which seems to indicate Buttercup influence.

That the Pencilled Hamburg originated in the Netherlands appears to be certain. Mr. Harrison Weir speaks (22) of purchasing in the mid years of last century specimens of Gold and Silver-Pen-



cilled at Leadenhall Market, London, newly imported. He, however, does not say whether these were rose-combed. It is evident that the breed at that period was very similar to the Friesland and the Campine, save that the last named has a single comb. These are described in the Chapter on the Dutch Races.

Rose-combed specimens are bred largely in the Low Countries. That the Pencilled Hamburgs came thence is certain. Probably the rose-comb was fixed more completely by breeding after they were imported, thus bringing them into conformity with the Mooney or Pheasant fowls, with which in general character they had so much affinity. What is stated above is adopted by Mr. W. B. Tegetmeier, who says (24) : ' The Pencilled birds formerly were, and still are, imported in considerable numbers from Holland, under the names of Pencilled Dutch and Dutch Every-day Layers ; but the Spangled birds appear to be exclusively English fowls, and are essentially distinct varieties, differing in size, plumage, and in formation of the skull.'

**History.**—The varieties of Hamburgs have been known under many names. These designations have included : Moonies, Pheasant, Bolton Grey, Bolton Bay, Creoles, Creels, Chittepratts, and Moss, in addition to those which are general at the present time, or which have already been mentioned. Of these the Spangled were variously called : Moonies, Pheasant and Moss ; the Blacks, Black Pheasant ; and the Pencilled, Bolton Grey, Bolton Bay, Creoles, Creels, Chittepratts, and Dutch Every-day Layers. These appear to have been bred for at least two centuries in the border districts of Lancashire and Yorkshire, where the Poultry Fancy had its origin. A writer in the early years of the eighteenth century (25) says :

' One of my pleasant reminiscences of this county (Lancaster) is the pleasure with which I regarded their pretty fowl, the Black Pheasants, as they called them, and which furnished me with many a delicious fresh egg for my breakfast. . . . The stout peasants regard them with much favour, and point with pride to their white ears and flat combs.'

Evidence is thus given as to what are the special characteristics of the breed. The Moonies, as they were called in Lancashire, and the Pheasant, the term used in Yorkshire, were bred equally with Golds





SILVER SPANGLED HAMBURGH HEN

(Bred by Mr. J. King, Hainsworth House, Silsden)

1st and Championship, Best Hamburg, Scottish Hamburg Club Show; 1st and Championship Best Hen in Show, Tunbridge Wells, and very many other wins



GOLD PENCILLED HAMBURGH COCK

(Bred by Mr. Joseph King, Hainsworth House, Silsden)

1st and Championship, Best Cock or Cockerel, Crystal Palace

Photos. A. Rice



and Silvers in both counties. As intercommunication was limited in those early days, and exhibitions were unknown, there were slight differences between the two. The type, however, was practically the same.

Spangled Hamburgs owe their perfection to the careful way in which they were bred in the two counties named. Long before the era of modern exhibitions there were small village shows at which the colliers, hand-loom weavers, and others of the industrial population competed with each other in displaying their fowls. Only the hens were shown, as the cocks were regarded as too ugly. It was by the introduction of a cross between the Yorkshire and a Mooney cock that the gentlemen were made fit for the show pen. It was the custom for the exhibitors to carry the birds under their arms to a room, usually in the village inn, and display them on a table, each exhibitor arguing the good points of his birds, whilst their rivals pointed out the defects. The judge heard all that was said *pro* and *con* for each bird, of which two were before him at the same time. The one rejected by him was taken away, and that remaining had to face the next competitor, and so on. The bird left at the conclusion of the contest was declared the winner. This system, which would be utterly impossible in these days, had much to do with the perfection to which the breed was brought, for each breeder learnt just in what direction his birds were deficient, so that he could strive to remedy the defects. Further, it undoubtedly explains the fact that in the early years of the show system a large proportion of the judges of Poultry Shows were from Lancashire and Yorkshire. The training for these duties was severe, and is denied to their successors. Further it explains why, when poultry shows became common in the middle years of last century, exhibitors were more numerous in these counties than in any other part of the country.

The application of the name 'Hamburgh' would appear to have been largely due to the Rev. E. S. Dixon, M.A., a prolific writer in the *Gardener's Chronicle and Agricultural Gazette*, and whose book (7) on poultry was published in 1848. He—for what reason we know not—adopted the name, secured its application by the Birmingham Show. So it remains, although the breed has no traceable connection with the great city and port on the Elbe. As the older breeders died off, and with the introduction of new races which produced eggs equal in

number and larger in size than those from the Hamburg, much of its popularity was lost, especially in view of what is stated below, namely, that the skilful trimmer and faker generally won the prizes, and that those who refused to adopt such methods failed to succeed.

**Economic Qualities.**—The Hamburg hen is one of the most prolific of domestic fowls, and without what is known as pedigree breeding or the use of trap nests, as a natural instinct. It is at the same time one of the most beautiful and perfectly formed among all the races of poultry. This combination would have made it universally popular had it not been for the small size of egg. Hamburg are small-bodied fowls and do not carry much flesh for that reason. This is true with other egg breeds which have won universal favour. It is the size of egg which is a determining factor. Eggs weighing under 2 ounces, except in the very scarce season, are often a drag upon the market. The varieties of the Hamburg which lay the largest eggs are the Blacks, the Silver-spangled, and the Gold-spangled, usually in the order named. As a rule eggs from hens of these varieties do not scale more than 19 to 20 ounces per dozen, and one of these is lost in an egg cup. Consequently, a consumer feels that he is not receiving a fair share of the breakfast. The egg cup is his standard. From a buyer's point of view eggs are worth much less than those from other breeds which weigh 20 to 25 per cent more. It is, therefore, a breed more for exhibition and amateurs than for practical purposes.

A very important question is thus raised. We cannot alter market requirements. In the general interest of the Poultry Industry it would be inadvisable to do so. A solution of the difficulty, partial at any rate, would be to sell eggs by weight. It is to be regretted that breeders have not, whilst improving the characters, at the same time selected for size of egg. The Hamburg is not, therefore, as a pure-bred fowl recommended for utilitarian purposes. From its prolificacy it is useful for crossing, if breeds which lay larger eggs are selected. Mixing with the Minorca has proved most desirable in that direction.

Hamburgs thrive best where they have range and are not kept in confinement, although many are so maintained. They are splendid flyers, and can easily clear a ten-foot fence. In cocks and hens Spangles cannot be produced for exhibition from one pen. Double mating, therefore, has to be adopted, which is always a great handicap.







BLACK HAMBURGH COCK  
(Bred by Mr. Joseph King, Hainsworth House, Silsden)  
1st Prizes at Ayr, Gt. Harwood, Hebden Bridge, and Keighley



REDCAP COCK  
(Bred by Mr. O. H. Young, 3, Sanderstead Ave., London, N.W.2)  
1st and Cup Barnstaple, 1st Crystal Palace and other prizes

Photos, A. Rice

The most serious hindrance to popularity of this race, after lack of size in eggs, is the fact that in many of the winning exhibition specimens, the comb is carved into the required shape. Careful breeding has to some extent obviated the necessity for this. There is still much of it done. Any breed which has to be trimmed in this manner will be limited in the number of adherents. The majority of breeders refuse to descend to such practices. In spite of the care which has to be taken to keep birds in good feather condition these fowls are hardy, and by no means difficult to rear, the Blacks and Spangled being highest in that respect, due to their activity of habit.

**Description.**—One of the most beautiful of our races of poultry the Hamburgh combines perfection of form, compactness of structure, and brilliance of plumage with graceful, active habit of body, pencilled cocks weigh about  $4\frac{1}{2}$  lbs., and hens  $3\frac{1}{2}$  lbs.; Spangled and Black are  $5\frac{1}{2}$  lbs., and hens  $4\frac{1}{2}$  lbs. The flesh is greyish in colour. Whilst young birds are very delicate in meat qualities, they are small for market purposes, and the flesh is a little too compact. The head is short and smart, and is surmounted by a large comb, which is square and broad in front, although in conformity with the size of body, gradually tapering to the rear, and ending with a long spike extending in a straight line with the upper surface of the comb, which should be firmly set upon the head. The upper surface is very level, and is covered with fine points. In hens the comb is the same, only much smaller. The face and eyes are red, and the earlobes are pure white, smooth, and as round as possible; in fact, a large amount of importance for exhibition is laid upon the earlobes. The neck is medium in length, and well arched; the neck-hackle, as also the saddle-hackle, is full and long, and the plumage is profuse. The breast is prominent and round, and the body medium in length; the thighs are slender and short, and the legs fine in bone, and medium in length. The wings are large and carried well up, whilst the tail is long and the sickle feathers broad, a good tail being most important. A leading feature with regard to this fowl is the excellence of what is called its style—that is, gracefulness of carriage.

**Varieties.**—There are five varieties—Gold-Spangled, Silver-Spangled, Blacks, Gold-Pencilled and Silver-Pencilled.

**Spangled.**—In these varieties the Golds have a ground colour



of rich golden bay, and in the Silvers of silvery-white. Each feather on the hens, and on certain parts of the body in the males, is tipped with a round spot or spangle, which should be green-black, giving the beautiful appearance to these birds. The females usually display the greatest perfection in markings. On the males the spangle is found on the breast and thighs, and at the end of the sickles and tail coverts. The hackles have a stripe down the centre. The shoulders, wing-bows, and back have small, dagger-shaped tips to each feather.

**Black.**—This variety is of a beautiful soft green-black over the entire body, and also on the wings and tail. The more perfect and brilliant the plumage the better is the bird for exhibition and ornamental purposes.

**Pencilled.**—There is the same ground colour in these varieties as in the Spangled, namely, golden bay and silver-white respectively, and the markings are found on the same parts of the plumage, except that each feather is evenly and distinctly pencilled transversely with fine parallel lines. When this pencilling and the intervening ground colour are of the same breadth, the effect is very striking indeed. The Pencilled are smaller in body than the others, presenting a more delicate appearance.

### OLD ENGLISH PHEASANT.

Nomenclature : Old English Pheasant.  
 Varieties : Gold, Silver.  
 Classification : Non-sitters.  
 Colour of Flesh and Skin : Grey.  
 Colour of Legs and Feet : Slate-blue.  
 Colour of Egg-shells : White.

**Origin.**—Reference has already been made (see Hamburgs) to the fact that Spangled and Black varieties of Hamburgs were formerly known as "Pheasant" fowls. It would appear that distribution was over the north-western counties of England and not only in the border districts of Yorkshire and Lancashire. In an interesting article by Mr. Myles Newton published in 1916 it is stated that (32) 'the Pheasant Fowl was bred extensively by the farmers of North Lancashire, Westmorland, and Cumberland, who kept them solely on account of their sterling utility qualities. It was a very common practice for the



farmers to exchange their male birds each year to get a change of blood; their most favourite cross was Spanish (Black) and Pheasant Fowl, noted for laying large eggs. Although no standard was formed until quite recently, shows have had classes for them for many years back, particularly in Cumberland, where they are great favourites, and promise to be a rival to the Game for popularity. . . .’ This does not take us very far back. That the race or type has been long known is evident from the quotation given in the Hamburg section taken from a book published in 1702 (25).

From the appearance and qualities it seems more probable that, in addition to the crossing of the Spanish with the Pheasant, some Game fowl blood was introduced. Mr. R. P. Brent, writing in 1854 (33) suggested the Malay, which is doubtful. He goes on to say that ‘The Pheasant fowls derive their name from their spotted plumage, resembling the spotted markings on the neck and breast of a common cock pheasant. Their various other names are expressive of any peculiar variation of feather.’ The late Richard Teebay expressed the opinion that (24) the Spangled Hamburg was a smaller and refined descendant of the Yorkshire Pheasant, due to crossing with the Lancashire Mooney. Although there is a close relationship between the Pheasant and the Hamburg the crosses into the former have given it distinction.

**History.**—Until 1916 when it was taken up by a few exhibition breeders, and later a Club formed, the Pheasant fowl was merely a race kept by farmers, without any effort to define its type or characters. Since that time it has secured an increasing number of supporters, and standards have been laid down. The breed is now recognised by the (English) Poultry Club.

**Economic Qualities.**—From remote times these birds have been popular by reason of their prolificacy as layers of good-sized eggs, in which latter respect they are much in advance of those produced by the Hamburg. The remarkable fact is that this breed is naturally a prolific egg-producer, and that high averages were obtained long before trap nests or pedigree breeding with that object in view were known. Further that the hens continue in profit for several years, which is a great asset and means that replacements are less than in some other breeds. The birds are very hardy both as chickens and adults, and

very good foragers so that they are specially suitable to range conditions. Although medium in size of body they make excellent table birds, with meat well distributed.

**Description.**—The body is somewhat long, deep and round, shoulders prominent ; neck carried gracefully ; skull fine, and beak of medium size ; face and wattles red ; lobes oval or almond shaped, medium in size and white in colour ; eyes, red, bright and prominent ; Comb rose, moderate in size, fine in texture, evenly set on head, flat on top, rather square in front, tapering to a single leader at the back, curving slightly downward ; neck of medium length and gracefully carried ; tail flowing carried well back ; legs medium in length, set apart, free from feathers, and four toes on each foot ; carriage alert and graceful. Weight : male, 6 to 7 lbs. ; female, 5 to 6 lbs.

**Varieties.**—**Gold.**—Ground colour rich bright bay with beetle-green-black markings, that is, the lacing on breast, stripes and tips of hackles; the tail of male is also beetle-green-black, as are bars on wings. In the females the black tail has a slight edging of bay ; body plumage has each feather tipped with a black crescent-shaped spangle.

**Silver.**—In these birds the ground colour is white with beetle-green-black marking as in the golds.

### REDCAP.\*

Nomenclature : *English*, Redcap ; *French*, Chapon Rouge ; *German*, Rothkappen ; *Dutch*, Roodkappen ; *Hungarian*, Veresbobitas.

Varieties : Derbyshire, Yorkshire.

Classification : Non-sitting.

Colour of Flesh and Skin : Grey.

Colour of Legs and Feet : Slate.

Colour of Egg-shells : White.

**Origin.**—That the Redcap is closely related to the Gold-spangled Hamburg is generally assumed. The relationship, however, is not easily determined. Various suggestions have been made with respect to the two breeds. The late Mr. Henry Beldon expressed to us personally his opinion that Redcaps are coarsely-bred Golden-spangled Hamburgs, in which size of body and of comb had been developed in contradistinction to the sprightly carriage, neat body, and finer comb of the last named breed. For that view there is no evidence in support.

\* Plate XLVI.



Our own opinion is that in the Redcap may be found the original type of the Gold-spangled Hamburg, such differences as there are being due to breeding on different lines. Mr. Albert E. Wragg, who has bred the Redcap for many years in Derbyshire, believes there has been an infusion of Old English Game blood (9), which is probable from the fact that cock-fighting was very popular among the Derbyshire hills. Another breeder, Mr. Thos. Watchorn supports this and says (26): 'I have long since come to the conclusion that the Redcap was produced by crossing the Gold-spangled Hamburg and the Black-red Game fowl,' by which we suppose is meant the Old English Game. The pugnacity of the breed would support this suggestion, and also the occasional tint in the shells of eggs. It does not, however, offer any explanation for the abnormally developed comb, which gives the name to this fowl.

**History.**—Formerly birds of this type were very common in Yorkshire, more especially among the hills in the Southern part of that county, and in Derbyshire. During the 'seventies of last century exhibitions at and around Sheffield had well-filled classes of Redcaps. That is no longer the case. Even in Derbyshire, although a few breeders remain faithful to their old love, the numbers of these birds are much less than formerly. The competition of other breeds, both for exhibition and production, and the less attractive appearance of the Redcap, accounts for their decadence. In the 'eighties of last century it appeared as if it would become extinct for practical purposes. The efforts of a few breeders, however, saved it from that fate. It appears to thrive best in hill countries, which explains the districts of its origin. The big comb has undoubtedly detracted from the attainment of greater popularity and wider distribution.

**Economic Qualities.**—This breed is remarkable as a layer, in which respect it almost equals the Hamburg so far as number of eggs is concerned, whilst the eggs are much larger, averaging two ounces each. Even among birds bred for exhibition the fecundity is highly developed. Records were published early in the present century, prior to the days of pedigree breeding and trapnesting, of a pullet which in 107 days produced 106 eggs, and during twelve months laid 220 eggs. The eggs are rich in flavour, thus supporting the suggestion of Game blood. The hens lay well in winter, if bred early and are well



housed. They are light in bone and carry a considerable amount of flesh for a non-sitting breed. The chickens are hardy and easily reared, feathering quickly, are self reliant and excellent foragers. Hardihood is a very striking quality of the Redcap. We have seen specimens among the Derbyshire hills when there were several inches of snow on the ground actively scratching wherever a bare patch was visible, and in full lay at the time. This is essentially a practical fowl, in which economic qualities are highly developed. But for the coarse comb it would doubtless have attained a much greater degree of popularity.

**Description.**—The most prominent feature is the comb. That is rose, but very much larger and coarser than on the Hamburg—in fact, frequently the comb is so large that it hangs on one side, and when that is the case it detracts from the appearance. The comb is full of points on top, and has a short spike behind. In size of body the Redcap is much larger than the Hamburg, as males weigh from  $6\frac{1}{2}$  to 7 lbs., and females from  $5\frac{1}{2}$  to  $6\frac{1}{2}$  lbs. To the practical breeder that should be a recommendation. In plumage the ground colour is red and somewhat dull. There are not the sharp contrasts found in the Spangled Hamburgs, as the black markings do not show to the same degree owing to the darker ground. In the males the hackles are striped with black, and the underparts and tail are of that colour. Both in males and females there are moon tipplings or spangles of black on the body. The beaks are horn-colour; the eyes red, as are the comb, face and earlobes. The legs and feet are slate-colour.

**Varieties.**—There are two recognised varieties, namely, the Derbyshire and the Yorkshire. Some breeders divide them into three classes, that is, the large, medium and small combed respectively. The last named, however desirable, are seldom met with.

**Derbyshire.**—These are medium in size of comb, the measurements of which in males are 5 inches long and 4 inches wide, and deep in proportion. In many specimens the comb is almost round, whilst in others it is broad in front and tapering behind, though not to a fine point. The former are preferred.

**Yorkshire.**—Larger and coarser in comb, which is high and has a decided tendency to one side. The effect is by no means pleasing. Excessive development of any point to the extent of abnormality is





CORNISH (INDIAN) GAME



undesirable. The discomfort of so large a comb is considerable, and it is wasteful to produce what is useless.

### CORNISH, OR INDIAN, GAME.\*

Nomenclature : *English*, Indian Game, or Cornish ; *French*, Combattants des Indes ; *German*, Indische Kämpfer ; *Dutch*, Indische Vechthoenders ; *Italian*, Indiana ; *Spanish*, Gran Combatiente de Indias ; *Danish*, Indische Kamphøns ; *Hungarian*, Indiai.

Varieties : Dark, White, White-Laced Red.

Classification : Exhibition, Table.

Colour of Flesh and Skin : Yellow.

Colour of Legs and Feet : Yellow.

Colour of Egg-shells : Dark Brown.

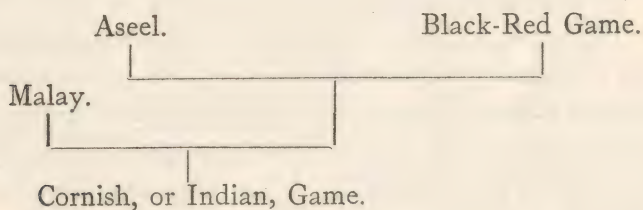
This breed is generally called Indian Game in Europe, which name was given when first introduced in England. In America, as a result of our writings early in the present century, the name usually applied is Cornish, which is more correct and preferable in every way. It was originated in the county of Cornwall, where it is still largely bred, more especially in the eastern half of the county. A large proportion of the chickens marketed are of this type, and that is true in West Devon as in Cornwall. Cornish fowls are in high favour for their meat qualities, commanding higher prices than the white, softer fleshed birds. That is the only part of Britain where yellow meat is preferred, which is also true on the greater part of the Continent, as white flesh is thought to be the finest. The colour of flesh and skin explains why the breed has been so warmly welcomed in America, where yellow meat has been considered as fuller in flavour and richer than paler fleshed races.

**Origin.**—Statements as to the origin of the Cornish are very conflicting, that is, of the Dark Cornish. It has been suggested that the breed was a direct importation from the East Indies. The only evidence in support we have found was from ‘Game Cock’ (the late John Harris, of Liskeard, Cornwall), who stated (27) : ‘A working man, who had been in the army and had seen service in India, visited my yards, and on being shown the pens of Indian Game, said, “Why, I’ve seen lots of those in India, and the natives fight them.”’ The consensus of opinion, however, is that whilst undoubtedly the breed owes much to Asiatic influence, it was produced in Cornwall.

Mr. C. F. Montessor, writing several years ago upon the Aseel, another Asiatic breed, but of true Game nature, stated that Aseel is the name by which that breed is known and styled in India, ‘and

has been adopted in England for some years in order to distinguish it from that which is designated "Indian Game" (a breed not known to the natives of India), and originated in England by the late Sir Walter Raleigh Gilbert upwards of sixty years since, when he imported from India some red "Aseel" into Cornwall, and there crossed them with the Derby Black-reds. Sir Walter (then General) Gilbert personally gave me this information in 1846.'

The Indian or Cornish was very different at first from what we now see. Mr. Harrison Weir quotes (22) a long letter from a Cornish correspondent in proof of the claim that the breed is not 'Game,' referring to the older type, which is of no moment, as they were not bred for fighting. About the earlier 'seventies of last century a cross was introduced, evidently of Malay, or what Mr. Lewis Wright called 'Pheasant Malay,' for he says (9): 'From this cross was derived a solid black breast and darker colour in the cocks, and greater richness of colour and more iridescence of the lacing in the hens; and we suspect the double lacing also, which we never remember to have seen before. What this Pheasant Malay itself really was we are at the present date unable to say.' The following table will give the composition of the breed:



**History.**—Mr. Harrison Weir states (22) that these birds were exhibited at some of the more important shows in 1858-1859. It was however, practically unknown outside Devon and Cornwall for nearly twenty years after that date. Our attention was first called to the breed about 1878 by the late Mr. James Dixon, one of the leading judges of his day, who spoke enthusiastically about its value for crossing to produce table chickens. Mr. Lewis Wright had seen a fine display at the Plymouth Show of 1870. Breeders were slow in recognising the value of the breed until about 1886, when Mr. John Martin, Mr. James Dixon, and others, in the *Live Stock Journal*, directed attention to it.



A year later Mr. W. B. Tegetmeier, in the *Field* newspaper, advocated the Indian Game and Dorking cross for its meat properties. In the same year the breed was introduced into the United States of America, where it has attained a fair amount of favour among exhibitors.

The Dark Cornish, or Indian Game, is the only type of this breed recognised in the English Standard. In the American are two other colours, namely, the White, and the White-laced Red. So far as the White Cornish are concerned they do not appear to possess a drop of Cornish blood. From such evidence as is available the races concerned in its composition were White Aseel, White Malay, White Georgia Game, and White Wyandotte, how mixed has not been revealed so far as we know.

The White-Laced Red Cornish variety appear to have been due to crossing of the Dark Cornish and Light Brahma in the first place. These birds originated in the State of New Jersey, and came into possession of the late Mr. W. H. Card, of Bristol, Conn, in 1908. He (28) introduced both White Indian Game and White Wyandotte blood, and by systematic selection for the colour desired finally obtained fairly well-marked specimens of unmistakable, but by no means good Cornish type.

**Economic Qualities.**—The Cornish is one of those races which as a pure breed is not to be recommended for general adoption. Therefore, popularity is mainly among exhibitors. It is a heavy-boned fowl, slow in growth, making too big a frame in relation to the quantity of meat carried on the body to be profitable. What we require in table fowls is a lighter-boned bird, growing quickly and meaty. The most earnest advocate of the breed cannot claim these qualities for it. There is a large quantity of flesh upon the Cornish, or Indian Game. That, however, is somewhat hard in texture, close in grain, and very yellow, requiring to be well hung before cooking. It is a poor layer. The eggs are very rich and fine in flavour, which explains why breeders are enthusiastic about it in that respect.

The great merit of this breed, apart from exhibition values, is where it is used for crossing. Evidence has been obtained in several countries that the introduction of yellow blood upon the male side, when mated with lighter-boned and white-fleshed hens, produces a very fine quality of flesh in the progeny. Yellow-fleshed varieties are usually very hardy.



The introduction of this influence gives that vigour which is always liable to be lost when we are striving for one special quality. Taking the white-fleshed races as a whole these are less vigorous than those with yellow blood, which fact needs to be recognised in order that we may as far as possible counteract the tendency to enfeeblement which sometimes follows specialisation. The cross which was for a considerable period advocated was between the Indian Game and the Dorking, resulting in fine quality, fleshy chickens, with light bone, and the majority of birds coming with white flesh, skin and legs. Birds of this cross, however, were not very quick growers, and were best adapted for winter fowls. Other crosses which can be commended to producers of table chickens, using the Cornish, or Indian Game male in all cases, are with the Sussex, Orpington, Bresse, etc., where white flesh and legs are desirable. If yellow flesh is preferred the number of crosses is much greater. In all cases softer fleshed races give the better chickens.

Cornish (Indian Game) are sometimes found difficult to rear on damp soils, and are not suitable for confined runs, as they thrive better upon range. Except for exhibition and crossing this breed is limited in its practical values.

**Description.**—The head is long and thick, lacking the fineness and keenness of the English Game fowl, yet not so thick as in the Malay. It, however, has the beetle or heavy eyebrows so characteristic of the last named breed. The skull is broad, beak very strong, well curved, and stout where it joins the head, giving the impression of great strength; the face is smooth and fine in texture and with the comb, wattles and earlobes is bright red in colour; the beak is horn or yellow; the comb is what is known as pea-shaped, closely fitting to the head, and small, as are the wattles; neck medium in length and slightly arched; body very thick and compact, broad at the shoulders, tapering to the tail; back is flattish, and the breast wide in front, and the deep body gives a massive appearance; wings small and carried close to the body; legs very strong, with feet corresponding, and are set widely apart, with thick thighs, heavy and muscular; the shanks are medium in length, not, however, so elongated as in the Malay or modern Game. The size varies considerably—males, 8 to 10 lbs.; females, 6 to 8 lbs. The carriage is upright, commanding and bold,





GREY SCOTS DUMPIE COCK  
(Bred by Mr. A. J. Major, Ditton Langley, Bucks)  
1st Olympia; 1st Cup Scots Dumpie Club Show, Paisley



SCOTCH GREY FOWLS  
(Drawing by Mr. J. W. Ludlow)



and the general appearance in both sexes is that of a powerfully-built fowl, very active, sprightly and characterised by great vigour. The Dark Cornish plumage should be very hard, that is, tight over the body. In colour the male is on the breast, underbody, and thighs a glossy green-black; neck-hackle glossy green-black with brown-crimson shaft in each feather; back, saddle, and saddle-hackle are a mixture of rich green, whilst the wing-bow is chestnut with a glossy black bar. The females are of a chestnut-brown with lacing of medium size, in some cases double, the markings being a metallic green or glossy black. The legs and feet in both sexes, as already stated, are yellow, and the deeper the better. Taking it altogether, this is a handsome fowl, which at once attracts the onlooker by its vigour and striking carriage.

**Varieties.—Dark.**—Under description is given the special colours of this, the leading variety of the Cornish, or Indian Game fowl.

**White.**—Although lacking in some respects the special carriage which is typical of this race, as might be expected from the origin, much has been done for improvement. The main difference is in respect to colour of plumage, which should be pure white. There is a tendency to coloured feathers as is generally the case with newly formed breeds and varieties.

**White-Laced Red.**—This is essentially a bird of colour and markings, for which reason it affords opportunity for the skill of breeders. The American Standard provides that in the male the ground colour shall be a bright, rich red, laced over nearly all the body with silvery-white, except the tail which is white with shaft and extreme centre which are red. In females the tail is red with white lacing. The under colour of feathers in both sexes is white.

### SCOTCH GREY.\*

Nomenclature: *English*, Scotch Grey; *French*, Cocou d'Ecosse; *German*, Graue Schotten; *Dutch*, Schotsch Grey; *Italian*, Coucou de Scozia; *Spanish*, Coucou de Escocia; *Hungarian*, Szürke Skot.

Variety: One.

Classification: General Purpose.

Colour of Flesh and Skin: White.

Colour of Legs and Feet: Mottled.

Colour of Egg-shells: White.

**Origin.**—Whence the Scotch Grey was derived is buried in oblivion. Inquiries do not carry us back more than to the mid-years of

\* Plate XLVIII.

last century. A Scottish writer about the period named states that (29) 'in Scotland this breed is much valued. It is of great antiquity, and still to be found in the most remote districts. . . . Some assert that it is mere modification of the Dorking, fine specimens of which occur of similar colour, which I have seen styled the "Blue Mottle," and it cannot be denied that it is largely imbued with the blood of these.'

Other writers support the suggestion that the breed has been established for a long period of time. No definite evidence is available as to its actual origin. Several years ago it was stated (30) that, 'it is thought to have originated from the old barn-door fowl of Scotland, and has been raised to its present state of perfection by careful breeding and selection.' There is no evidence that the Dorking was used in its production, although that breed has been long known in several parts of Scotland. The shape is totally different, and the fifth toe is never met with on the Scotch Grey. Of course four-toed Grey Dorkings may have been introduced. Mr. Harrison Weir says (22) that during visits to Dumfriesshire in 1862-1864, he found the ordinary fowl of the country largely grey in body colour, which fact would support the contention that the Scotch Grey, as we now know it, has been evolved from the barn-door or common fowl met with in North Britain, but which may in turn have been influenced by the Dorking and the fighting Game of former days.

**History.**—This breed has never received full justice even in its native country, and has been displaced by imported races. In the 'seventies and 'eighties of last century it was kept and exhibited to a much greater extent than is now the case. At that period it was widely distributed, to our personal knowledge, around Melrose and Kelso, and in the Carse of Gowrie. The display of Scotch Greys at the Edinburgh Poultry Show of 1877 was remarkable both for numbers and quality. A decline soon afterwards set in, due to the influence already mentioned, which has continued. Fowls met with upon farms are no longer of this type, in spite of efforts—very spasmodic, it is true—to regain the ground lost.

**Economic Qualities.**—The Scotch Grey must be classed as a General, or Dual Purpose breed. Many are non-sitters, and others which evince the maternal instinct are unreliable. In some strains,



however, the hens prove excellent mothers. They are very hardy indeed, the chickens are easily reared. The hens are good layers of large white-shelled eggs, but cannot compare in respect to numbers with those whose main function is egg-production. In these days when the highly fecund races of fowls are losing to a serious extent in size of egg, the Scotch Grey should regain its position. It is essentially a farmer's fowl. What is lost in number of eggs is more than compensated by their size, and by the excellent flesh properties of this fowl. The meat is well placed, abundant and of good flavour, partaking of that juiciness when cooked which is preferred in European markets, more especially in a country like Scotland, where little is done in fattening. These birds are not so lengthy in body as are several of the table breeds. Where demand is both for eggs and poultry, combined with vigour of constitution, the Scotch Grey deserves attention. We regret that the breed is not better known. In poultry-keeping, however, fashion cannot be ignored. This breed has proved to be excellent for crossing, and mated with the white-fleshed races especially it gives that hardihood which is essential for rapid growth and where forcing is employed.

**Description.**—The plumage found on birds of this breed is not met with on other races. The ground colour is of a pale bluish-grey, each feather clearly and evenly barred with a dark metallic blue. The barring on the body, thighs and wings is straight across the feather, and should be at equal distances from each other. On the hackles, saddle and tail there is a slight angle from the edge to the centre. Both sexes are barred the same except that in the hens the bars are larger and more clearly defined than in the male. A chief difficulty in breeding fowls with barred or cuckoo plumage, is that some of the progeny come with very light plumage and others very dark, almost black. It is thought that as chickens the lighter birds prove to be cockerels and the darker to be pullets. The beak is white, or white streaked with black; eyes red; comb, face, earlobes and wattles bright red; legs and feet mottled black and white; comb single, fine in texture, medium in size, and firmly set on the head; head and neck are long; breast broad and full; back short and broad; and legs long, carrying the body well off the ground, with good substance of bone. Weight: males, 7 to 8 lbs.; females,  $5\frac{1}{2}$  to  $6\frac{1}{2}$  lbs., though some speci-



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mens are considerably larger. At one period there was a greater tendency to the Dorking type, as in some strains had been introduced a cross of the Cuckoo Dorking. This was evidenced in shape and soft feather in specimens exhibited. That is no longer the case, thanks to the Scotch Grey Club. A sprightlier bird is now preferred, following more after the Game type.

### SCOTCH DUMPIE.\*

Nomenclature : Scotch Dumpie.

Varieties : Black, Dark, Cuckoo, Grey.

Classification : General Purpose.

Colour of Flesh and Skin : White.

Colour of Legs and Feet : White, or mottled white and black.

Colour of Egg-shells : White.

**Origin.**—This fowl which is a leading member of the Dwarf Poultry type deserves greater attention than it has ever received, not alone for its quaintness but for practical qualities. Nothing is known as to how they originated. Mr. Cluny Macpherson states (31) that ‘They are generally supposed to have been brought to Albainn (Scotland) by the Phœnician traders long before the invasion of the Romans.’ He frankly admits that there are no records, only tradition. Hence nothing is known. All that can be done is to accept them as an old race whose origin cannot be traced.

**History.**—That the Dumpie has been bred in Scotland for a long time is, however, evident. Writing in the *Feathered World* in 1919 the above named gentlemen says that he had ‘kept and bred them for forty years, and my mother had them for forty years before that, and I know she got them from her mother.’ In another communication (31) he claims that ‘The Scottish Dumpie is the descendant of the ancient *coileach-trathadair*, the time-keeper cock ; *coileach-naireaadair*, mark time cock ; *coileach degb sheinneadair*, the cock who chants at dawn,’ and gives the following interesting information :

‘In feudal days the Dumpie cocks were known as the time cocks (*coileach chime*), and were kept in the dums or keeps or creeps under the stronghold houses. They were also carried with soldiers in war time for the purpose of time-keeping, and for sport, but their principal duty was as listeners in war time for the purpose of time-keeping,

as there is no more sensitive creature to sound than the Dumpie. They will indicate a distant sound when the best of dogs will give no notice. That is why the Romans hated them so much, because they had discovered that they could not approach a Picts or Scots encampment without the Dumpie giving warning.

‘One time they tried to surprise a camp by approaching bare-footed, but got among thistles in the dark, when the rough booted Scots had them fairly at their mercy. The thistle, after that, became the emblem of the country.

‘It is a strange coincidence that their (the Dumpie’s) homes are to this day most prevalent on the route Bruce took in his wanderings from Dumfries to Kildrummie in Aberdeenshire, and on the route he took from there through Badenoch and Lorne to Arran. It is said that it was through the Dumpies crowing that the men of Lorne discovered where he and his men were. I know a family of Seatons in the Athole district who had some of the finest Dumpies I ever saw.’

The first specimens of the Dumpie exhibited in England was at the Metropolitan Exhibition, London, in 1852. Wingfield & Johnson refer (8) to a pen of these birds exhibited at Cheltenham the following year, and say, ‘the ground colour of the cock’s plumage was white, the hackle, breast, saddle, with the flight and tail feathers being lightly grizzled with black. The white earlobe was very fully developed.’ These birds have never won much favour, and are regarded for their quaintness rather than of practical value.

**Economic Qualities.**—These birds are hardy, and excellent layers of large, white-shelled eggs. They are most reliable sitters and mothers, gentle and quiet as sitters, and attentive mothers to the chickens. In flesh qualities they are very fine, the meat being abundant and soft, as might be expected of birds gentle in disposition and not very active owing to the short legs.

**Description.**—In body the Dumpie is square and deep, with broad and flat back, and wings of medium size, carried close; neck of moderate length, with flowing hackle; the skull is fine, the beak strong and well curved; eyes, large and clear, red in colour; comb is usually single, though rose-combs are met with. This, together with the face, wattles and earlobes, is bright-red; tail full and flowing; legs very short, shanks not more than  $1\frac{1}{2}$  inches; four toes on each foot; the



carriage is heavy and the gait waddling. The plumage is not bright, and the colour somewhat uncertain. The different colours, namely, Blacks, Cuckoos, Darks and Silver Greys, can scarcely be termed distinct varieties. Weight : males,  $7\frac{1}{2}$  lbs. ; females, 6 lbs.

### MARSH DAISY.\*

Nomenclature : Marsh Daisy.

Varieties : Buff, Wheaten, White, Black, Brown.

Classification : Exhibition, General Purpose.

Colour of Flesh and Skin : White.

Colour of Legs and Feet : Pale willow-green.

Colour of Egg-shells : Tinted.

**Origin.**—The following notes are from information supplied by Mr. G. W. Stott, Hon. Secretary of the Marsh Daisy Club. In the 'eighties of last century Mr. John Wright, of Marshside, Southport, Lancs., was breeding Old English Game Bantams, and had rose-combed White fowls kept for egg production, descended from a cross between a Black Hamburgh cock and White Leghorn hens. About that period he purchased a sitting of Cinnamon Malay eggs, from which he hatched and reared two hens. These were mated to an Old English Game Bantam cock, from which mating a cockerel was bred of Partridge colour, which was given to a friend who mated it with some of the half-bred rose-combed hens from the Hamburgh-White Leghorn cross. From these a White rose-combed cockerel was bred, and this was given in turn to Mr. Wright and bred with the rose-combed white hens already mentioned. From the time named until 1913 Mr. Wright never introduced any fresh blood. He hatched at intervals of three or four years only, and he is said to have chosen his most vigorous cockerel to breed from. His birds were famed all over the district as layers of large eggs.

In September, 1913, Mr. Chas. Moore, the originator of Marsh Daisies as now bred, procured two hens from Mr. Wright, who by that time was 80 years of age. He had not bred any fowls for three years, and lost the male bird referred to above, so that the possibility of keeping to the same blood was gone. Mr. Moore records that he bought a pure Pit Game cock, mating it to the two hens. A cockerel from this

\* Plate XLIX.







WHEATEN MARSH DAISY HEN

(Bred by Mr. E. C. Parsons, Williton, Somerset)  
1st Crystal Palace; 1st and Special Birmingham;  
and many other prizes



WHEATEN MARSH DAISY COCK

(Bred by Mr. F. J. Hemelryk, Partridge Green, Sussex)  
3rd Prize Club Show, Birmingham; Reserve Crystal Palace Club Show

mating was put to the two hens. In the next season a further cockerel from this second mating was bred back to the two hens. Mr. Moore states he now purchased some Buttercups. Desiring to secure the green leg and the white lobe, he added a good Buttercup to the Marsh Daisy breeding pen, which mating yielded in his first season one green-legged chick. By careful selection and mating he evolved the Pale Willow-green leg and the White lobe, two features which are considered essential in good specimens of the breed.

**History.**—By the year 1921 it was found that there was much to be done as there was great variation in the plumage, colour of leg and in combs, showing that the breed had been launched too soon. From a lot of eggs purchased for hatching there came wheaten, some partridge, some splashed, whilst the legs varied from a bright yellow to a blue, with perhaps twenty per cent of varying green shades. The combs were pea-shaped, Buttercup, many single, and only a few that could be called rose. Since that year much has been done, as a result of forming the Marsh Daisy Club, towards improvement. Still black splashed cockerels are obtained, and the lobes are not all that could be wished for. The green legs are well established.

**Economic Qualities.**—The breed is very vigorous, and a good all round fowl for production. Many of the pullets lay exceedingly well, the eggs are usually about  $2\frac{1}{4}$  ounces in weight and tinted. A great recommendation is that they are long layers, and quite a paying proposition when three to four years old. Mr. Stott had a hen which laid well during the Spring and Summer of its sixth year. The breed is a late moulter, and each succeeding year the moult is deferred until when three to four years old they seldom come into profit before early March. They lay well, however, until the moult, keeping in profit until mid-October and even later in the year. For the table the Marsh Daisies are very good indeed, having a well fleshed breast, with meat of good flavour, and are fairly light boned. The chicks are hardy and easily reared. As a general rule the males are vigorous as indicated by the fertility and hatchability of eggs in the early months of the year. Trap nesting, however, has shown that there is much to be done for improvement of productive qualities even though individual records have been secured well over 200 eggs per annum. A breed is, however, proved by its averages rather than its exceptions. The two



important recommendations of this fowl are the size of egg, and the excellent production subsequent to the pullet year.

**Description.**—The standard adopted by the Marsh Daisy Club provides that the body shall be long, fairly broad, especially at the shoulders, with square and blocky appearance; back almost horizontal; breast well rounded and prominent; tail full, and carried at an angle of 45 degrees; neck and legs moderately long; shanks and feet light boned, free from feathers, with four toes; skull fine; beak, which with the toe-nails is horn-colour, short and well curved; eyes rich red with black pupil, bold and prominent; comb, face and wattles red, the first of which is rose, medium in size, evenly spiked, finishing in a single leader half an inch long in line with the surface, rather low on head; earlobes almond shaped and white; legs and feet pale willow-green. Weight: males, adults, 6 to 7 lbs., cockerels,  $5\frac{1}{2}$  to 6 lbs; females, hens 5 to 6 lbs., pullets  $4\frac{1}{2}$  to  $5\frac{1}{2}$  lbs. The plumage is semi-hard, of fine texture, and the carriage upright, bold and active.

**Varieties.**—As the Marsh Daisy is still in course of fixation we do no more than name the varieties, which are: Buff, golden buff throughout. The standard suggests a whole buff bird and to the skin, which is a mistake, as the under colour should be lighter, and the black to bronze tail more natural than of the same colour as the body plumage; White, pure and even throughout; Black, with beetle green sheen; Wheaten, following the Game as so termed; Brown, that known as Partridge, the original colour of fowls as seen in the *Gallus Ferrugineus* in India, the Black-red Game, Brown Leghorn, etc.

### COVENEY WHITE.\*

Nomenclature: Coveney White.  
 Variety: One.  
 Classification: Non-sitting.  
 Colour of Flesh and Skin: Yellow.  
 Colour of Legs and Feet: Yellow.  
 Colour of Egg-shells: White.

**Origin.**—This breed is the result of a cross between a White Leghorn Cock and Sicilian Flower hens. It is the latest breed to be introduced in Britain. The Coveney White differs from the White Leghorn in respect to carriage, in that it is larger in body than birds

\* Plate L.





COVENEY WHITE FOWLS  
(Bred by Mr. S. Street-Porter, Coveney Manor, Cambs)



of the latter race which have been kept specially for egg-production ; is tighter in feather ; has a longer breast ; carries more muscle ; and has the cup comb which characterises the Sicilian. It was originated by Mr. W. J. Unwin, a grower of Sweet Peas living in Cambridgeshire, who carefully developed and bred them over a period of seven years. By mating on mendelian principles he eliminated the plumage coloration of the Sicilian and fixed the type.

**History.**—In 1923 the stock was purchased by Mr. Stanley Street-Porter, a well-known pedigree poultry breeder, who brought them forward, and in 1925 secured their admission to the (English) Poultry Club's Standard. He has since that time devoted attention to development of fecundity.

**Economic Qualities.**—The chief superiority of the Coveney White over the White Leghorn is in respect to flesh, which is more abundant and softer in texture than usually met with in that race. Some of the hens have proved to be prolific layers and thus indicated latent fecundity. By selection much has been done to secure greater uniformity in egg-production, and to increase the size of egg, which has been below what is desired for market purposes.

**Description.**—In appearance this fowl is upright in carriage and active in habit ; body of medium length and depth ; breast long and full ; back long, broad and straight ; wings somewhat long and carried close to body ; neck long and arched, covered with flowing hackle ; head of medium size, surmounted by a cup-shaped comb as in the Sicilian ; beak yellow ; eyes bold ; face red, as are the wattles, which are long ; lobes almond in shape, white or cream, the former preferred ; tail moderately full, carried at an angle of 45 to 50 degrees ; legs moderately long, bright yellow in colour, free from feather ; four toes on each foot, which are well spread ; plumage pure white throughout, though some pullets show slight tint on the breast, which is being bred out. Weight : males,  $4\frac{1}{2}$  to  $5\frac{1}{2}$  lbs. ; females,  $3\frac{1}{2}$  to  $4\frac{1}{2}$  lbs.

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- (17) Sussex Fowls, by Clem Watson, F.Z.S. (London, 1926).
- (18) The Book of the Sussex, by S. C. Sharpe (Lewes, England, 1920).
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- (21) Poultry, by W. B. Dickson (London, 1838).
- (22) Our Poultry, by Harrison Weir, F.R.H.S., (London, 1903).
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- (24) The Poultry Book, by W. B. Tegetmeier, F.Z.S. (London, 1873).
- (25) A Trip to the North of England, by Thomas Sutcliff (London, 1702).

- (26) *Poultry* (London, 1883).
- (27) *Stockkeeper* (London, 1886).
- (28) Popular Breeds of Domestic Poultry, by John H. Robinson  
(Dayton, Ohio, 1924).
- (29) The Henwife, by Mrs. Ferguson Blair (Edinburgh, 1862).
- (30) Live Stock Journal Almanac, (London, 1895).
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CHAPTER XI  
AMERICAN RACES OF FOWLS.





## CHAPTER XI

### AMERICAN RACES OF FOWLS.

PLYMOUTH ROCK.

DOMINIQUE.

WYANDOTTE.

JERSEY BLACK GIANTS.

RHODE ISLAND RED.

BUCKEYE.

RHODE ISLAND WHITE.

CHANTICLER.

The progress made in Poultry Husbandry during the present century has been greater in North America than in any other country. That is due primarily to the efforts of Federal, State and Provincial Departments of Agriculture, to the educational facilities offered by Colleges of Agriculture, to the experimental and research work at these and Experimental Stations, to the influence of Societies, and to the ever growing demand for eggs and poultry throughout the Continent, which is one of vast opportunities. This branch of production is the most widely distributed, and is available to many who are unable to breed larger stock. As a consequence the question of breeds of poultry is of the utmost importance, racially and productively.

In this connection may be noted that whilst the Western Hemisphere has given to the world the turkey and one race of ducks, in the first instance, settlers in the New World obtained the fowl from Europe soon after they had fixed their habitations west of the Atlantic. Much later Asia was drawn upon. Probably the first importations were of Game fowls, that is, into Virginia and the southern colonies. By the pugnacious nature of these birds they would be capable of self defence, and fall in with the humour of the pioneers. It is more than likely that the settlers in New England, by reason of their Puritan principles, would be less interested in the fighting races. When the French occupied what is now Canada it may be assumed that they would

bring over fowls from the motherland. On these subjects we have very little information. The development of poultry breeding, as we now know it, arose as the question of food supply became pressing, and men were fixed in their habitations. For a considerable period, as in Europe, little attention would be paid to breeds. In the first half of the Nineteenth Century attempts were made to secure types specially suited to American conditions, and to introduce races unknown or less known in the Old Countries. It has previously been shown that the Shanghai and the Leghorn, or Italian, fowl, were transported direct from Asia and Europe respectively to America, and were unknown in Britain until they had been bred for several years in that country. These, however, were not regarded as occupying the field. Ere long special breeds were evolved, built upon lines thought to be suited to the climate and conditions, and to meet the ideals of breeders. These largely followed the Asiatic type, that is, were large in body, hardy, with yellow skin and legs, and clean in the leg and more active in habit of body than the original importations from Asia. In one respect American ideals have differed distinctly from the European, in that for table birds yellow flesh and skin has been preferred in America, whereas in Europe the white-fleshed races are regarded as finer in flavour. In that respect there are signs that a change is taking place, and white flesh is becoming more popular in the best markets. The American breeds have proved most valuable additions to poultry stocks. Their wide distribution and universal recognition is a tribute to American breeders, who have ever kept prominently forward the general economic qualities, and, with one or two exceptions, have not exaggerated special characteristics.

### PLYMOUTH ROCK.\*

Nomenclature : in all countries, Plymouth Rock.

Varieties : Barred, White, Buff, Silver-Pencilled, Partridge, Columbian, Blue.

Classification : Exhibition, Dual Purpose.

Colour of Flesh and Skin : Yellow.

Colour of Legs and Feet : Yellow.

Colour of Egg-shells : Brown.

**Origin.**—The original assumption was that the Plymouth Rock was due to a cross between the American Dominique and the Black Cochin, or Java, for the last term was equally applied to the Cochin.

\* Plates LI to LIII, and LXXVI.







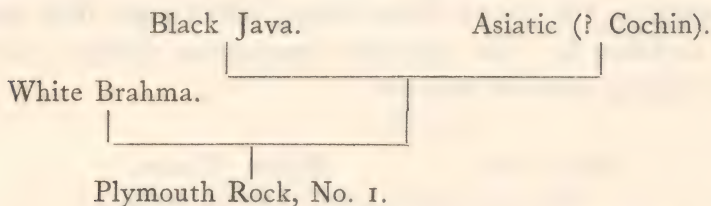
PLYMOUTH ROCK COCKEREL  
(English Type)



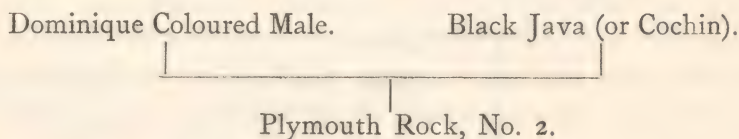
PLYMOUTH ROCK HEN  
(English Type)

*Photos, A. Rice*

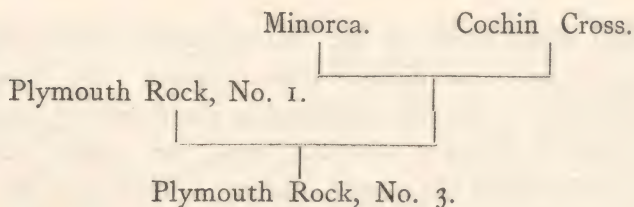
Later investigations have indicated that the influences were much wider, and that there were four lines of breeding. That will explain the great variations of type which have characterised the older varieties of this breed. It is stated that these four lines were united about the year 1878, producing the modern fowl as now seen. Such differences as there are between American and European Plymouth Rocks may be attributed to the importations of specimens before 1878 and prior to the final crossing noted below. The origin would appear to be best described by the following tables of descent :



The White Brahma, or Birmingham Whites, as they were called by the late Mr. I. K. Felch, were said to be birds of the Brahma type, white in plumage, with slightly feathered legs.

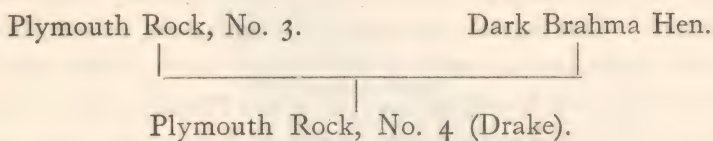


It would appear evident that the male in the above cross was a single combed Dominique, pure or half-bred, and that the hens were of the Cochin type, as they had feathered legs.

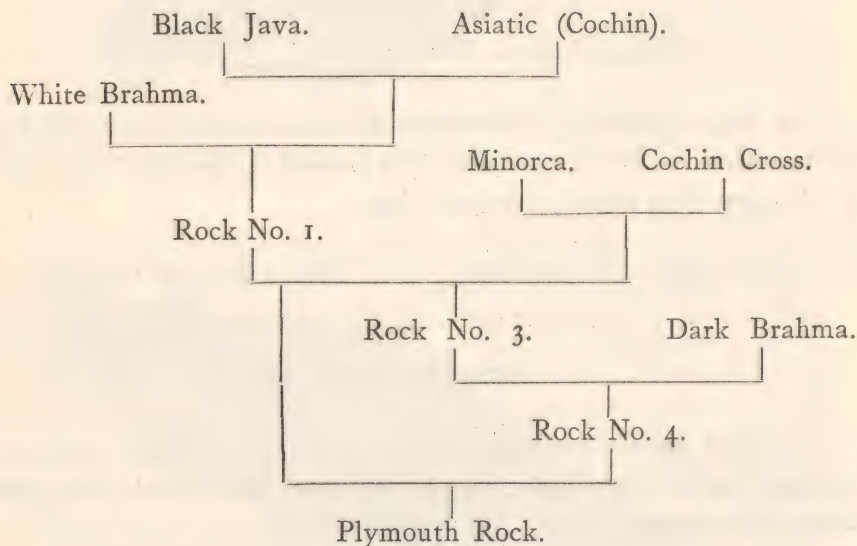


As a result it might be expected that the single-comb would be clearly defined, and that, whilst retaining the shape of body and colour

of legs and flesh of the Cochin, there would be a tendency to barred markings in the plumage.



The colour and type were finally fixed by in-breeding members of the last named (No. 4) family, and the introduction of Rock No. 1, thus producing the famous Essex strain, which from 1878 onwards carried all before it. The aggregate composition, therefore, is shown in the following table of descent :

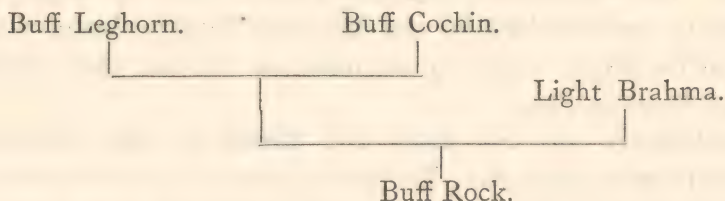


What is stated above refers to the Barred variety, from which the Whites as sports were from time to time obtained. Mr. John H. Robinson mentions (1) an account published in the *Fanciers' Journal* in 1874, by Mr. Wm. E. Shedd of Waltham, Mass., who at first advertised the White Rocks under the name 'Albions.' He stated that he had bred them since 1864, and that they had been produced by another breeder in 1854 from a cross of a large white hen (supposed to have been a single-combed Light Brahma) and a White Dorking cock. The



progeny was stated to have been bred in for two seasons, and then crossed with another white male of unknown breeding.

Buff Rocks have no relationship with the Barred variety, and are not descended therefrom. The plasticity of the domestic fowl is again indicated by the way in which these birds, without a trace of Rock blood, have been moulded to the breed character. From records available the following shows the line of descent :



At first the Leghorn and Cochin influences were very manifest. In process of time these were bred out. American Buff Rocks were formerly more reliable than English. It was customary in British Shows to exhibit Buff Orpingtons which came with yellow legs, as many did, as Rocks. At one time English Buff Rocks contained a considerable proportion of Orpington blood. That period has passed. On the other hand in America it would appear that the variety owes much to the Rhode Island Red. In both countries these have been bred to Buff type. Although the Buff Rock has never attained more than a moderate amount of popularity, it has valuable properties, and is a layer of large-sized eggs.

The other four varieties are entirely bred for exhibition. So far as known the Silver-Pencilled was the result of a cross between, probably, a white Plymouth Rock and a single-combed Silver-Pencilled Wyandotte ; the Partridge owes much to Brown Leghorn and Partridge Cochin blood ; the Columbian to crosses of White Plymouth Rock and Light Brahmas ; and the Blue to a cross which is doubtful.

**History.**—The name Plymouth Rock was given to a fowl introduced about the year 1849 by Dr. J. C. Bennett, composed of Cochin, Dorking, Malay and Wild Indian blood. It soon passed into oblivion, and present stocks have no connection or relationship with it. The first specimens of No. 1 type, referred to above, were exhibited by Mr. D. A. Upham, of Wilsonville, Connecticut, at Worcester, Mass., in

1869. These were originated by a Mr. Joseph Spaulding, of Putnam, Conn. Much interest was manifested in them, and led to the steps which ultimated in the Essex strain (No. 4) nine years later. From the first they caught on both with exhibitors and practical producers. Something must be allowed to the fact that this was an undoubted American production. It is not too much to say that to this breed may be attributed much of the great development of poultry breeding in America. The Whites were introduced about 1880, the Buffs were admitted to the Standard by the American Poultry Association in 1893, and the others at subsequent intervals, the last thus adopted being the Blues in 1919.

Barred Rocks were introduced into Britain in 1879, when they speedily won wide popularity. For several years the classes of Rocks at exhibitions were by far the largest, and competition was very keen indeed. The reward of successful breeding was great, as high prices were paid for high-class specimens. The task was by no means easy in producing fine specimens. As one breeder stated at the time named, he did not expect to obtain more than two to three per cent of the chickens hatched fit for exhibition. The proportion is now much greater. Variations, however, are largely in evidence. It was not alone among exhibitors that the breed secured favour. Its undoubted economic qualities led to wide adoption in many parts of Europe. Until the advent of the Orpington its influence was more in evidence as a farmer's fowl than any other. Within recent years it has lost the position once held both for exhibition and production.

**Economic Qualities.**—The Plymouth Rock is essentially a farmer's fowl by reason of its vigour, its activity and foraging instinct, and ability to withstand even the more exposed situations. At the same time it thrives well in confinement. It is large in body, carrying a considerable amount of flesh. The chickens are quick growers for a dual purpose breed, and can be reared to a killing size in about fifteen weeks, which is more rapid than is usual with fowls of the same class. In European countries the yellow flesh and skin detracts from its value, as does the weight of bone. In what may be termed the second-class markets this breed holds a good position, and they are valuable for crossing purposes. In America yellow-fleshed birds have been preferred, which explains its popularity on that continent. As these







PLYMOUTH ROCK HEN

(American Type)

(Bred by Mr. C. H. Latham, Lancaster, Mass.,

U.S.A.)



WORLD'S RECORD BARRED ROCK HEN

(Bred and Owned by Dominion Experimental Farm, Agassiz,

B.C., Canada)

Laid 326 eggs, weighing 26.18 oz. per doz., at Dominion Egg-laying

Contest, Agassiz, B.C.

Photo, W. J. Moore

birds fatten well the extreme yellow of the flesh and skin is reduced where milk feeding is adopted. As layers the Plymouth Rock is decidedly above the average of the heavier bodied races, more especially in winter. The eggs are of a fair size, are deeply tinted in shell, which is a recommendation in some markets. Hens make reliable sitters and mothers. The chief complaint respecting them is that they are too prone to maternal duties, and in these days with the exaltation of laying qualities, the Rock lost popularity for the reason stated. It is well balanced on both the instinctive and productive sides.

**Description.**—The Plymouth Rock is a large, deep-bodied fowl, squarely built, compact in appearance; breast fairly prominent, medium in length, and well rounded; back broad, short and rising to head and tail; neck strong, thick, well-arched, and thickly covered with hackle; head stout, without being thick, and of medium length; face, comb, wattles, and earlobes bright red; eyes full; comb single, small medium in size, straight, and upright with even serrations; thighs are short, wide apart; legs stout, strong, firmly set, yellow in colour, as are the feet, which have four toes, and entirely free from feathers; wings small, carried close; tail small and short in both sexes, without long sickles in the male. The whole appearance is that of a large, well developed and proportioned fowl, with strong bone and good frame, yet compact and close-feathered. Weight: American—Cock,  $9\frac{1}{2}$  lbs.; Cockerel, 8 lbs.; Hen,  $7\frac{1}{2}$  lbs.; Pullet, 6 lbs. English—Male, 9 lbs.; female, 8 lbs.

**Varieties.**—At first there was only one variety, that now known as the Barred. The number has been largely increased.

**Barred.**—In fowls so designated each feather is transversely crossed by parallel bars moderately narrow and of equal width showing the ground colour clearly between each. When the breed was first introduced the bars were somewhat broad and not very distinct. Soon after the breed was taken up by British breeders efforts were put forth to improve both the ground colour and the barring, and with considerable success. Such, however, was not carried to an extreme. At a later period American breeders adopted a similar policy, and the specimens which win in the great exhibitions are very fine indeed in the barring, so much so that it has the appearance of pencilling. Whilst some of the males thus displayed are remarkable



tributes to the breeder's skill, and more especially the males, in that the barring is uniform from head to tail, it should be borne in mind that females are naturally broader in barring, and that in fowls of this race bred for production the ultra-fine barring is not in evidence. British breeders have not carried the fine barring to the same extent. The question has arisen whether there has not been ultra-refinement, which is generally the precursor of decadence. Time alone can prove whether that view is justified.

The tendency with all varieties of poultry, more especially in the male, is towards variation. For example, these frequently show blackness in the tail, deeper markings in the breast, to a lesser extent upon the back, whilst the wings and hackles generally have a tendency towards lighter marking. To maintain, therefore, an even colour throughout is difficult. It is in this direction where the breeder has a problem to solve. One fact is evident, namely, that wherever the Standard calls for the same markings all over the entire plumage the process of fixing this, if it can be accomplished, is tedious and costly, and in the doing so there is a danger of ultra-refinement and in some cases of degeneracy.

The American Standard describes the ground colour of the plumage as greyish-white in the Barred variety, whereas the English Standard is white with a bluish tinge. There is, however, practically no difference. Each feather has narrow bars across which may be described as beetle-green-black. It may be pointed out that the bar colour is not so sharply defined as in pencilled races of fowls. Each feather has a narrow, dark tip. For exhibition the determining factor is the evenness of barring all over the body inclusive of the tail and wings, in which the bars are somewhat wider than on the neck and body. In America the bars have been produced which are very narrow, whereas the European more resemble the original colour and markings. So far as Barred Rocks are bred for production, in which respect they are very popular, it is generally found that the latter predominate, as might be expected.

**White.**—This is a very pleasing variety, as the entire plumage is snow-white. Whilst it has attained a fair amount of favour in America, in Europe it has not been kept to any extent except for exhibition. Some of those who have bred this variety express the opinion that it is







WHITE PLYMOUTH ROCK COCKEREL

(Bred by Mr. M. L. Chapman, Wilburtha Poultry Farms,  
Trenton Junction, New Jersey, U.S.A.)  
1st Prize Young Pen Male, Madison Square Garden



WHITE PLYMOUTH ROCK PULLET

(Bred by Mr. M. L. Chapman, Wilburtha Poultry Farms,  
Trenton Junction, New Jersey, U.S.A.)  
1st Prize Pullet, Madison Square Garden

one of the best-egg producers and of larger eggs than from the Barred.

The English Standard recognises a Black Plymouth Rock which has no place in the American. It is seldom seen and is usually very dull in colour of feather.

**Buff.**—That fowls with whole-coloured buff plumage have afforded great opportunities for the skill and patience of breeders is probably an explanation of the vogue which these had for a considerable period. Their popularity has waned, even though it is generally acknowledged that in quantity and size of egg and in flesh properties the Buff Rock is one of the best of its family. There is considerable difference in the shades of buff found on all fowls of this colour, and the hens are often very patchy which detracts from their appearance. When to the efforts to obtain evenness of surface colour there is the seeking for buff tails and buff under-colour to the skin, it is not surprising that very few high-class specimens are met with, as both are against Nature. The American Standard permits a lighter shade of under-colour, which the English does not. Following upon the introduction of this variety into Britain there was much crossing with the Buff Orpington with the result that some came with white skin and legs and were designated under that name, and others with yellow skin and legs and were called Buff Rocks. That has now been overcome.

The following varieties are recognised in the American but not in the English Standards :

**Silver-Pencilled.**—In the male, breast, black ; lower body feathers and fluff, black, slightly tinged with grey ; back silvery-white on surface, saddle, silvery-white, with black stripe in each feather ; wings have a broad band or bar across, the bows and secondaries showing white when folded ; neck-hackle lustrous greenish-black, with a narrow edging of silvery-white ; sickles and coverts of tail black, the latter edged with white ; head silvery-white. In the female the body colour is of steel-grey, as is the fluff, with soft black pencillings ; neck-hackle silvery-white, with black centres to feathers which are slightly pencilled with steel-grey ; tail black except the two top feathers which are pencilled ; under-colour of body, slate.

**Partridge.**—In this variety is found the coloration of plumage which is that of the original Jungle fowl, and as seen in the Partridge



## 298 POULTRY BREEDING AND PRODUCTION

Cochin, Black-red Game, Brown Leghorn, etc. It is most effective. The danger lies in the adoption of Standards which do not recognise the variations in colour of females, so that double mating is resorted to.

**Columbian.**—In this pleasing variety the body plumage is white in both sexes. The males have neck hackle and cape of lustrous black, with a narrow edging of silvery-white; tail black with smaller coverts greenish-black edged with silvery-white. In the females the neck feathers are broad black with an edging of white, coverts black with a narrow edging of white.

**Blue.**—Slaty-blue throughout in both sexes, mostly laced with darker blue.

### WYANDOTTE.\*

Nomenclature : Wyandotte in all countries.

Varieties : Silver-Laced, Gold-Laced, White, Black, Buff, Buff-Laced, Partridge, Silver-Pencilled, Columbian, Blue, Blue-Laced.

Classification : Exhibition, Dual Purpose.

Colour of Flesh and Skin : Pale Yellow.

Colour of Legs and Feet : Yellow.

Colour of Egg-shells : Tinted, varying from buff to brown.

Following upon the introduction of the Plymouth Rock, which had proved to be a most valuable addition to the races of Domestic fowls, there came the Wyandotte, distinctive in type, attractive in appearance, and with qualities which commended it to the practical poultry-keeper. That was at a period when there was an essential need for new breeds and varieties, which explains the welcome accorded to several, notably, the Leghorn, the Langshan, the Plymouth Rock, and later, the Orpington. It is a notable fact that the appearance of new breeds, whether imported or evolved, has led to wider interest and to extension of poultry-breeding.

**Origin.**—The first Wyandotte was that known as the Silver, now the Silver-Laced, which was, by reason of the colour and markings, and also the comb, different to any known breed and, therefore, attractive. The name was applied as indicative of its American parentage. So far as known the first specimens were the result of a cross between

\* Plates LIV to LVIII.





WHITE WYANDOTTE COCK

(Bred by the Hon. John S. Martin, Port Dover, Ont., Canada)



WHITE WYANDOTTE HEN

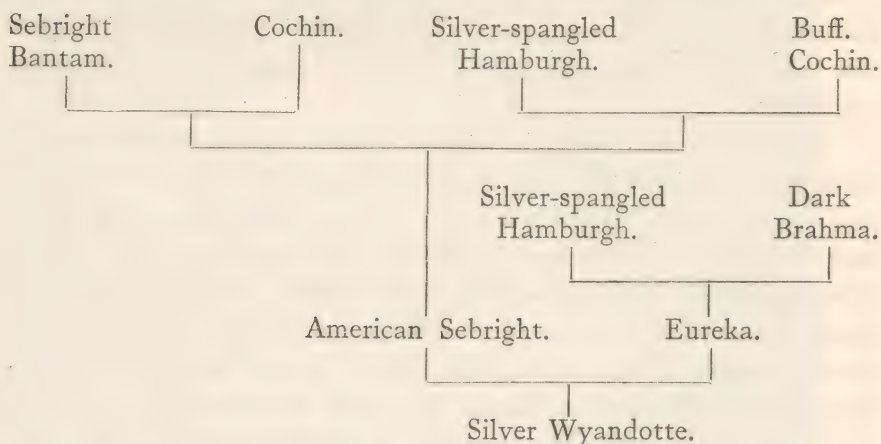
(Bred by the Hon. John S. Martin, Port Dover, Ont., Canada)



a Sebright Bantam and a Cochin hen, as they were called Sebright Cochins, though other names were also applied. The following account was published in 1884 (2) and is quoted as that which is generally accepted :

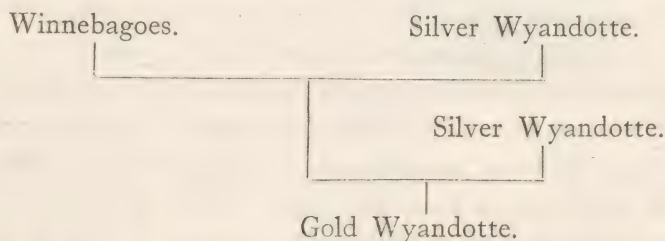
‘ It was without doubt, the intention with the first cross to produce an improved Cochin Bantam, the cross being a Sebright Bantam cock and a Cochin hen. When the size proved too large they were offered and illustrated as Sebright Cochins. This suggested the cross of Silver-spangled Hamburgs with Buff Cochins. These two crosses, mingled with another cross, a half of Buder and Cochin hen, became the blood mixture of the early birds offered to the American Poultry Association as American Sebrights. Their friends could not agree as to the comb, being so suggestive of an American Bantam ; the request (for recognition) was refused (in 1876) and the matter was referred back to a committee. About the same time a cross of a Silver Hamburg with a Dark Brahma hen produced a still more desirable type, having pea combs. Mr. Kidder, of Northampton (U.S.A.), contended earnestly for this characteristic being accepted in the regulation. But these crosses, while being bred by themselves, presented troublesome features of both feathered and smooth legs, single and rose, also pea and rose, combs. The best birds were called Eureka. When these two wings, or original crosses, were brought together, more uniform specimens were produced, the Hamburg blood being in the greater proportion. The combs, in the majority of cases, assumed a more rose appearance, though smaller and closer to the head ; the feathers disappeared from the legs, yet the golden colour of skin and legs remained. The males in colour reverted strongly to Dark Brahmas, and the females gave evidence of their Hamburg ancestry by presenting a laced plumage.’ The breed was admitted to the American Standard in 1883 under the name it still bears.

So far as can be traced the following represents the descent of the Silver Wyandotte :



Thus will be seen that the Asiatic influence is very strong.

The exact origin of the Gold-Laced Wyandotte is difficult to trace, as there is a lack of direct evidence. Mr. John H. Robinson states (1) that it was introduced 'by Joseph McKeen, of Omro, Wisconsin, who claimed to have produced it from a mixture of Partridge Cochin, Single and Rose-comb Brown Leghorns, Buff Cochin, and (perhaps) a little Golden Sebright Bantam blood a few years before 1880.' To this mixture he gave the name Winnebagoes. The following may be accepted as the line of descent :



White Wyandottes and Black Wyandottes are sports from the Silvers, fixed by careful selection. The former has won great popularity by reason of its valuable qualities.

In the Golds, and to a lesser extent in the Whites, was a distinct tendency to buff tinge. That, however, has been almost entirely eliminated.

Buff Wyandottes have a very mixed ancestry. Mr. A. F. Hunter,







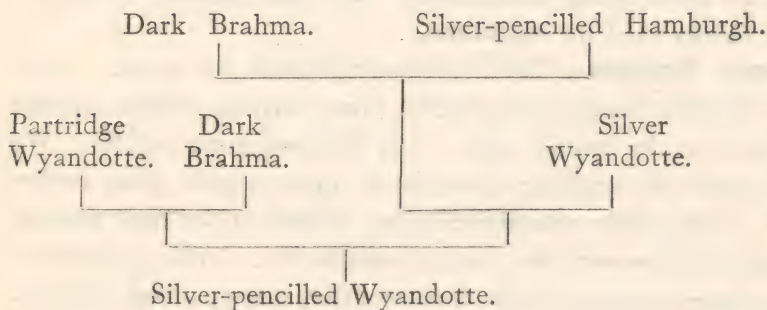
*Photo, A. Rice*

WHITE WYANDOTTE COCK—ENGLISH TYPE  
(Bred by Mr. Leslie Williams, Liss, Hants)

writing to the Author some years ago said that 'The American Buff Wyandottes are largely from Rhode Island Red stock,' and that the breed named was used both for the production of Buff Plymouth Rocks and Buff Wyandottes. That may have been the basis. Then a Buff Cochin cock was mated with a Golden Wyandotte hen; next a cock of the last named variety was mated with a Creamy-white Wyandotte hen, and one of the cockerels produced by this cross was mated to Buff Cochin hens. The progeny of the latter cross was then mated with a cockerel from the first cross named above, from which mating came the cock which was the father of the first Buff Wyandottes. On the female side, first a Golden Wyandotte was mated with Creamy-white Wyandotte hens, and the pullets thus produced mated with a Golden Wyandotte cock. Next a cockerel from this mating was crossed with Buff Cochin hens, and the females bred from it were the mothers of the first Buff Wyandottes. The great grandsire and great grandam on the male side were Buff Cochins and the grandam on the female side also. The Buffs were admitted to the American Standard in 1893. Buff laced is a variation from the solid buff recognised in the English Standard.

**Partridge.**—In this case two distinct breedings took place with the same object in view, namely, Wyandotte type and form with Partridge plumage. In the first of these Gold Wyandotte and Gold-pencilled Hamburgs were mated. In the other was an admixture, in what proportions has not been revealed, of Gold Wyandotte, Partridge Cochin, Cornish, and Winnebago already referred to. The two families were united with the result as now seen.

**Silver-Pencilled.**—These have been produced with the plumage colour of the Dark Brahma, the descent of which is as follows :



**Columbian.**—This name has been given to a variety of Wyandottes, as of Plymouth Rocks, with plumage colour and markings as found on the Light Brahma, the Light Sussex, etc. The first appear to have been the result of crossing a White Wyandotte cock with pullets from a cross of a Barred Plymouth Rock and a White Wyandotte hen with white plumage except for striped hackles. Other matings took place, notably between a White Wyandotte and a Light Brahma, a White Wyandotte and Silver-Pencilled Wyandottes. Although popular in America at one time it afterwards declined in favour. Quite a number of British breeders have taken it up with considerable success.

Blue and Blue-laced varieties are included in the English but not in the American Standards. These have the slate-blue colour of feather which is the most difficult to secure and maintain.

**History.**—When first introduced the Silver-laced both in America and Britain commanded a large amount of attention, though the breed did not secure that wide popularity which was at first anticipated. Whilst admired, as still is the case, the adherents were mainly exhibitors. Even production breeders prefer fowls which are less variable than are laced breeds. Breeding to a recognised standard under such conditions is difficult. The Golds have never caught the public fancy. It was not until the advent of the Whites, and their remarkable productivity in almost all countries, that the Wyandotte began to assume a leading position among breeds of poultry. The story is much the same on both sides the Atlantic. In spite of the small size of egg, which has been considerably improved, and the great success which has been achieved by these birds in laying trials, the White Wyandotte is now one of the four most prominent varieties of fowls. In Britain they compete very closely with the White Leghorn. In America the latter are more widely distributed. All other varieties of Wyandottes are chiefly bred for exhibition.

**Economic Qualities.**—The Wyandotte is built for work. It is active, an excellent forager, very hardy, tame, thriving well in exposed positions and on the heavier soils. The chickens grow rapidly. We have had cockerels weighing upwards of three pounds when twelve weeks old. The pullets commence laying, if bred at the right seasons of the year, when between five and six months old. Their great value is as winter egg-producers, in which respect they occupy a high position.







WHITE WYANDOTTE HEN—ENGLISH TYPE  
(Bred by Mr. Leslie Williams, Liss, Hants)

*Photo, A. Rice*

The general testimony is that the White, the Golden and the Buff are specially good in this respect although all the varieties possess the same quality. As a rule the Buffs lay the largest eggs, the Golds next and the Whites are least satisfactory. For table purposes the colour of flesh varies somewhat. Silvers are good, but the Whites are superior to any. All, however, have yellowish flesh and skin. When in lean condition these birds do not carry much muscle. They fatten very well, and where milk feeding is employed the flesh whitens considerably, leaving a creamy or pale golden tinge. As sitters and mothers they do not become broody early, but are faithful when so engaged. Upon European markets a yellow-fleshed fowl does not realise so good a price, other things being equal, as one with white flesh. The Wyandotte is creamy rather than yellow. In America yellow flesh has been preferred. This is one of the most useful dual-purpose breeds we possess.

**Description.**—In appearance the Wyandotte is short and cobby, compact in body, with moderately tight feathers. Whilst having an indication of its Asiatic ancestry, it has not the Y-shape of the Brahma, or Langshan, or even the Plymouth Rock, resembling more the Brahma than any, without, of course, any feathers on the legs or feet or hocks, thus giving it a cleaner and more blocky appearance. It is well balanced and graceful in carriage. The body is short and square, the back broad and short, with neck rising sharply; breast full and well rounded, with keel, or breast blade fairly defined; the posterior part of the body is well developed, indicating good egg qualities; wings small and carried close to the body; neck of medium length, fully covered with hackle, and arched; head short and broad, surmounted by a rose-comb peculiar to this breed, in that, whilst covered with rather blunt points on top, square in front and tapering behind, it follows the curve of the head and is not flat. In this respect many European Wyandottes do not compare favourably with the American, as the former have a coarser comb, standing higher above the head and flat on top. Where that is the case these birds are usually coarser in flesh, and should be culled out; wattles small, and with the comb, face and earlobes are bright red; tail wide and thick, and the sickles in the male are short; legs of medium length, strong, yet fine in bone, and the toes are four in number. Weight: Males  $7\frac{1}{2}$  to  $8\frac{1}{2}$  lbs.; females  $5\frac{1}{2}$  to  $6\frac{1}{2}$  lbs.



**Varieties.—Silver.**—The body colour is silvery-white. The breast and under parts of the male have each feather on the outer edge marked with jet-black lacing; in the hen the entire body plumage is marked in the same manner. In the male the head and neck feathers are silvery-white, except that the neck-hackle has a clear black stripe through the centre of each feather, and the saddle-hackle has also the same stripe; the back, coverts, thighs and fluff are black. Evenness of marking is the great desideratum, in which respect many birds fail. The beak in all varieties is horn-colour, the eyes bright bay, and the shanks and feet yellow.

**Gold.**—In these the ground colour is of a golden bay, with markings as in the Silver, though the lacing is not very even. As a rule the appearance of these birds is somewhat dull which has militated against its popularity with exhibitors. In Silver and Gold the hens are fully laced.

**White.**—The plumage should be pure white throughout. Any tendency to straw colour on the one hand, or to albinism on the other should be avoided. The former may be a sign of vigour of constitution; the latter is that of weakness. This variety when in prime condition is very handsome yet without any extreme, and it has proved a remarkable layer. Its chief faults are a tendency to coarseness of comb, to creaminess in the plumage, and to loss of size in the birds which prove to be heavy producers.

**Black.**—Very few of these are met with. The birds are uncertain, having a tendency to purple bars, especially in the neck-hackle, back, and wings. The beak is dark, the legs and feet yellowish black, or dark yellow, shading to willow. It is provided that the soles of the feet must be yellow.

**Buff.**—As with all fowls having buff plumage, the colour question presents difficulties to breeders, as there is always a tendency to patchiness, especially among the females. Many birds are reddish in hue, whilst others are much paler. Any shade may be accepted so long as it is even, from lemon buff to deep buff. One questionable point is that Standards demand tails and wings of the same colour as that of the body plumage. It is natural that these should be black or much darker than the body. An all buff colour is difficult to attain and maintain. The English Standard asks for clear buff through





GOLDEN WYANDOTTE HEN  
(Bred by Mr. C. Calvert, Priestthorpe, Bingley, Yorks)



SILVER WYANDOTTE COCK  
(Bred by Mr. C. Calvert, Priestthorpe, Bingley, Yorks)



to the skin, the American permits a lighter under-colour. The latter is most desirable.

**Buff-Laced.**—On the neck and saddle-hackle the feathers have a white stripe down the centre, and on the breast and thighs in the cock each feather is laced with a well-defined white line, the back, shoulders and wing-bow solid buff; in the hens the plumage is laced throughout. In each sex the under-colour and tail are white.

**Partridge.**—For richness of colour this variety stands first among Wyandottes. It is what is known as black-red, that is, in the male the head, neck, back and wings are rich orange or golden-red, the neck-hackle striped with black, and the breast, fluff and tail glossy metallic black. The hens are brown pencilled with black.

**Silver-Pencilled.**—The ground colour is silvery-white, where in the Partridge orange or golden-red is found, whilst the breast, etc., are black. The effect is very striking.

**Columbian.**—In this the body is white, with neck-hackle in both sexes black edged with silvery-white. In the male the tail is black, and coverts with lacing of white, and the latter applies also to the hen.

**Blue and Blue-Laced.**—The former an even shade of blue, and the latter has a red-brown or chestnut ground colour with blue markings.

## RHODE ISLAND RED.\*

Nomenclature : *English*, Rhode Island Red ; *German*, Rhode Island Rote ; *Spanish*, Rhode Island Rojo ; *Hungarian*, Rhode Island Barna.

Varieties : Single-combed, Rose-combed.

Classification : Exhibition, General or Dual-purpose.

Colour of Flesh and Skin : Yellow.

Colour of Legs and Feet : Yellow or Reddish-yellow.

Colour of Egg-shells : Deep brown.

**Origin.**—The breed under this name has become increasingly popular in many countries during the present century, now ranking among the leading four races of fowls. It has proved most responsive to varying conditions. Whilst it is attractive to the exhibition breeder by reason of the opportunity for exercise for his skill and patience, it

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has won its position by productive qualities, more especially as a layer of fine quality, larger-sized eggs. It was the result of crosses made by farmers living on the shores of Narragansett Bay, in the State of Rhode Island, not with the object of forming a new breed, but of securing strong, vigorous and profitable fowls for supply of the New England as well as the nearby markets. By reason of the favourable climatic conditions, due to having the sea on three sides, eggs and poultry have been produced largely by the farmers in the area named.

Mr. John H. Robinson, who has given considerable attention to the breed, and who accompanied the Author in his first visit to the district in 1906, when the breed was scarcely known elsewhere, has traced the origin as far back as possible. He states (1) that 'According to information given the Author about 1901 by men of seventy to eighty years of age, who had from boyhood given special attention to poultry, the farm type of Rhode Island Red was the common type in that region as far back as they could remember—that is, at least as far back as 1830. Hence the origin of the type must precede that date by some years.' He suggests that it may have originated as early as the closing years of the eighteenth century, but that who originated it and when is unknown.

The statement has been made (3) that the basis of the breed was laid in the 'fifties of last century when some Red (? Partridge) Cochins and Malays were introduced to Westport, Mass., and Little Compton, Rhode Island. The crossing of these with the common fowls of the district, which would appear to have been of a very mixed character, changed the type and produced birds which suited the local conditions and needs. Later on further crosses were made. Mr. H. S. Babcock, writing in 1896, stated that (4) 'A Mr. William Tripp, late of Little Compton, had a number of the old-fashioned Malay hens (buff). He got from a neighbour a rose-combed Brown Leghorn cockerel, and put with his Malay hens, and found the cross to be a most excellent one for eggs and market poultry. As long as he lived he bred them, selecting each year a buff rose-combed cockerel to breed from; but still they came mixed, rose and single-combs, and most of them showed the Leghorn marking more or less, especially in hackles.' So far as can be traced the descent of the Rhode Island Red is as follows:





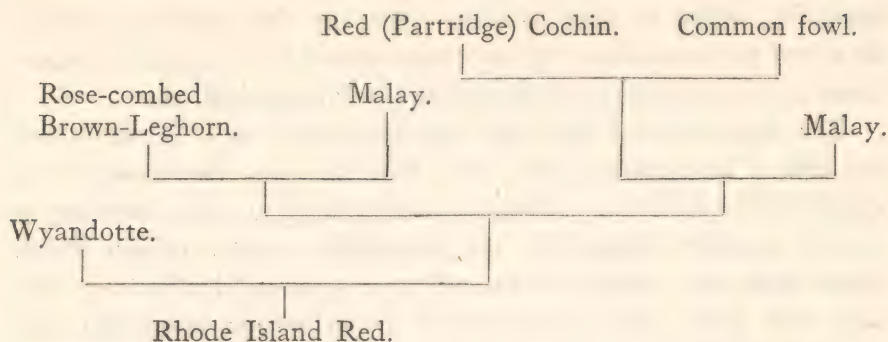


Photo, C. Hosegood

COLUMBIAN WYANDOTTE PULLET  
(Bred by Messrs. J. Dickinson & Son, The Milestone, Milton  
Road, Cambridge)  
1st Prize, Visiting Cup and Special for Best Wyandotte in  
Coloured Classes, Tring Show



CHANTECLER COCK  
(Bred by Brother M. Wilfrid, Institute of Agriculture, La  
Trappe, Que., Canada)



The appearance of this breed indicates that the Asiatic blood predominates.

**History.**—The following interesting letter, written by Mr. W. P. Shepherd, of South Swansea, Mass., deserves reproduction (4): ‘At one of the first exhibitions of the South Massachusetts Poultry Association, Mr. Jenney presented some buff birds for entry, a trio alive and a number dressed, saying that in his judgment they were the coming birds for both eggs and poultry. He was asked what they were called, and replied they had no name. Then someone suggested he should give them one. “Well,” said he, “suppose we call them Rhode Island Reds.” And so they were entered on the book by that name. That was in 1879 or 1880. Their good qualities induced the poultrymen of Little Compton and Tiverton, Rhode Island, Westport, and Dartmouth, Massachusetts, and other towns in the vicinity, to take hold of them and breed them in large numbers.’ In the winter of 1891-1892 they were exhibited at Philadelphia under the name of Golden Reds. It is stated that they were also exhibited about that period both as Buff Plymouth Rocks and Buff Wyandottes, into the composition of which it is probable that the Rhode Island Red has largely entered. From the last date mentioned the progress was slow except in Rhode Island and Southern Massachusetts, where much was done to improve the characters of the race. In 1901 a standard was formed for the breed by a Club established in its interest, and in 1904 it was admitted to the American Standard. Subsequently the progress made was rapid both for exhibition and production. The advancement made in coloration of plumage has been remarkable. At the same time it has proved most responsive to breeding for higher



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fecundity, whilst its flesh qualities appeal to the American market. As a fowl for farms where vigour of constitution is of the utmost importance it is in many districts displacing the Plymouth Rock.

The Rhode Island Red was first introduced into Britain about the end of last century, but were kept by very few breeders and specially for exhibition. About 1910 they began to make their way in several countries, helped by the foundation of the British Rhode Island Red Club, which has exerted a very powerful influence. Not only was there great improvement in exhibition specimens, but gradually the Reds made their way in the production field, as evidenced by the records made in the great Laying Trials, which were remarkable for a heavier type of bird. The last named is supported by practical experience on farms, that is, as layers. There are abundant signs that this advance will continue, unless the fancier influence is exerted in the direction of abnormal development and sacrificing everything for colour. In the best markets the colour of skin and flesh is not acceptable in Europe. That, however, does not apply to those of a lower grade.

**Economic Qualities.**—Most notable of all the qualities of this breed is its constitutional vigour. It is thus suited to exposed situations and heavier soils. It is fairly rapid in growth and makes a well-fleshed, meaty fowl. The flesh is deep yellow, as might be expected from its Malay parentage, to which, also, may be attributed the deep tint of the egg shell. The Rhode Island Red has always been reputed to be an excellent layer. That has proved to be the case by records attained both privately and in Laying Trials. In this respect should be remembered that those responsible for its development kept size of egg to the fore, combined with a good average output, and without sacrificing the flesh qualities. Continued over a long series of years these qualities have become fixed. What has commended the breed is its adaptability to varying conditions, and that it has responded to the efforts of those who have sought to develop both its egg and meat properties. Up to the present time selection of greater perfection of external characters has not decreased productivity, and we hope this may not be the case. The Rhode Island Red is an example of the desirability of making the economic qualities the primary object in developing a new breed or variety, and seeking to improve externals when that has been accomplished. The hens are excellent sitters and







RHODE ISLAND REDS.  
From original painting of Mr. Franklane Sewell. (By courtesy of "The Reliable Poultry Journal")

mothers, without being broody all the time, and these birds are active and good foragers. Up to the present time the breed has not been generally adopted by commercial egg farmers, which is probably an advantage. As a farm fowl it holds one of the first positions, and it is growing rapidly in popularity.

**Description.**—In body these birds carry themselves in a line with the ground, are long, broad and deep, and present an oblong appearance, with close plumage; the wings are somewhat large, carried horizontally and are closely folded; neck of medium length, with a full hackle; head of medium length and size, slightly curved beak, which is red-horn or yellow; face smooth, and large oval eyes, wattles of medium size, and, with well developed earlobes, red in colour; comb is single or rose in accordance with the variety. Where rose it is set close to the head and the spike behind droops slightly; legs are of medium length, with well rounded shanks, reddish or yellow in colour, with a line of red on the sides, and four toes on each foot. The body colour in both varieties and sexes is mainly a brilliant red, varying a little in tone, and the tail and coverts black. Evenness of colour combined with brilliancy of sheen can be attained and are very effective in combination. The standards call for red under-colour. There are considerable risks in insisting too strongly upon what is not natural. Among the best producing females the under-colour is lighter. Weight: males,  $7\frac{1}{2}$  to  $8\frac{1}{2}$  lbs.; females,  $5\frac{1}{2}$  to  $6\frac{1}{2}$  lbs.

**Variety.**—Except that single and rose-combed Rhode Island Reds are recognised, and that both may be produced by the same stock, only one variety exists, as in other respects there is no difference.

### RHODE ISLAND WHITE.

Nomenclature: Rhode Island White.

Variety: One.

Classification: Dual Purpose.

Colour of Flesh and Skin: Yellow.

Colour of Legs and Feet: Yellow.

Colour of Egg-shells: Brown.

**Origin.**—Whilst the designation adopted for this breed, although fully justified from the fact that it was formed in the State of Rhode Island, it may be misleading. There is not the slightest relationship



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between it and the Red. Birds of this type have been known since the early years of the present century, and are stated to consist of one-eighth White Wyandotte, three eighths Partridge Cochins, and one-half White Leghorn. It is also stated that White Wyandottes and Buff Cochins entered into the combination. The first matings were said to have been about 1888. As might be expected there was considerable diversity of type for several years.

**History.**—The name by which it is known was given in the early years of the present century. After the formation of the Rhode Island White Club (America) in 1911 the progress was more rapid, and a considerable degree of popularity was attained. This breed was admitted to the American Standard in 1922. Should it be, as is possible, that the Rhode Island Red suffers from the colour complex, that is, from the production standpoint, if the White maintains its qualities, it may become more general. In that respect a white-plumaged fowl has a great asset.

**Economic Qualities.**—The claim is made that what has been stated respecting the Reds applies to the Whites, though with not quite the same certitude in respect to egg-production. Much will depend upon the responsiveness to farm conditions.

**Description.**—The standard adopted in America for this breed, of which there are both Single and Rose-combed, though the latter alone has been recognised up to the present time, is practically the same as for the Reds.

### DOMINIQUE.

Nomenclature : *English, French, Dutch*, Dominique ; *German*, Dominikaur ;

*Danish*, Dominikanere ; *Spanish*, Dominicana.

Variety : One.

Classification : Dual Purpose.

Colour of Flesh and Skin : Yellow.

Colour of Legs and Feet : Yellow.

Colour of Egg-shells : Tinted.

**Origin.**—So far as we are aware there is no direct evidence as to the origin of this race. In one book (5) it is stated that ‘this old-fashioned breed is said to have been brought over by the early puritans.’ In Dr. J. C. Bennett’s “Poultry Book,” published in 1850 (6), the

suggestion is made that it was introduced into America by the French. All, however, is pure conjecture. Probably it was evolved mainly by crossing, and that the cuckoo plumage was found to be most useful for protective purposes.

**History.**—In the "Poultry Book" just mentioned the writer says, 'I have never witnessed the least variation in their appearance for the last thirty years,' which takes us back more than a hundred years. He further refers to them as follows: 'Plumage, invariably grey, both cock and hen—all over grey; heads small and smooth; combs, double generally, though occasionally single, and small; wattles, small; size, below ordinary.' It is apparent that the Dominique was used in forming the Plymouth Rock, prior to the introduction of which breed it was steadily increasing in public favour in eastern America. From that time it has declined and there are very few breeders. Nor has it been adopted in any other country.

**Economic Qualities.**—Dominiques are said to be very hardy, fair layers, making reliable sitters and mothers. The flesh on the body is good, and suits the American taste.

**Description.**—The body is broad and deep, with full breast, and is supported by strong legs of medium length; the neck is medium in length, well arched, with abundant hackle; head medium in size, surmounted by a large rose-comb, firmly placed, square in front, well covered with small points or spikes on top, terminating in a spike behind, the point of which turns slightly upwards; comb, face, wattles and earlobes bright red, and eyes bright bay; body colour of plumage is greyish-white, each feather crossed with parallel bars of blue-black. Weight: males, 6 to 7 lbs.; females, 4 to 5 lbs.

### BUCKEYE.

Originating in Ohio, hence its name, this breed resembles in carriage and general appearance the Cornish. It is stated that Cornish, Black-red Game, Buff Cochins and Barred Plymouth Rocks, were all employed in its formation, the first of which has proved the most prepotent. At first it was called Pea-combed Rhode Island Red. That was not accepted owing to its different carriage. The Buckeye has not



attained any degree of popularity. Its colour plumage is mahogany-bay, with black tails, coverts and flights. It is a heavy-boned bird, fair in flesh and a moderate layer. Weights: males, 8 to 9 lbs.; females,  $5\frac{1}{2}$  to  $6\frac{1}{2}$  lbs.

### JERSEY BLACK GIANT.

Nomenclature: Jersey Black Giant.

Variety: One.

Classification: Table.

Colour of Flesh and Skin: Yellow.

Colour of Legs and Feet: Black, with under-part of feet yellow.

Colour of Egg-shells: Tinted.

**Origin.**—This race, which was admitted to the American Standard of Excellence in 1922, was produced in the State of New Jersey to meet demand upon the great markets of New York, Philadelphia and the Atlantic Coast resorts for large, well-fleshed roasting fowls. Previous to that time this trade had been met by crosses of the ordinary Asiatic or American type, but which were not uniform or otherwise satisfactory. It appears to have been evolved in the 'seventies of last century, and is said to have been given the added appellation of 'Black' due to the fact that those chiefly concerned in its evolution were two brothers named Black. The object was to obtain a very large fowl carrying a considerable amount of flesh, as distinct from the lighter-bodied egg type which were rapidly growing in popularity. Although information is not very reliable the original cross was evidently between the Black Java and Dark Brahma, with the addition, it is suggested of Partridge Cochins, Barred Plymouth Rock, Langshan, and, possibly, the Cornish. At first the birds were somewhat rough, but breeders have brought about a definite type.

**History.**—In Central New Jersey the Black Giant is bred largely. It has not, however, been adopted elsewhere up to the present time to any great extent, due to the fact that the egg breeds are more popular. It has yet to make its way in other countries.

**Economic Qualities.**—The hens of this breed are fairly good layers. No attempt, however, has been made to develop fecundity, and wisely so, as its chief quality is flesh. The amount of meat carried on the body is considerable, and it is well distributed, although more



on the thighs than is found in the higher type of meat breeds. This is of excellent quality. These birds are slow in growth and are specially suited to meet demand for large-bodied winter fowls. They respond well to fattening, and are quiet in disposition.

**Description.**—The body is long, wide and deep, with a broad breast carried well forward, and an almost horizontal back; wings medium in size, well folded and carried closely, in appearance rather small; neck moderate in length, well arched and full; head large and broad, with short, well curved beak; comb, single, somewhat large, carried upright, evenly serrated, and following the shape of the neck at back, fine in texture as indicative of the flesh; eyes, large and full; wattles of medium size, round; earlobes, red in colour as is the face, rather large; tail large, well spread, and in the male carried at an angle of forty-five degrees; legs, of moderate length, straight, strong, toes straight and well spread; legs and feet clean and without feathers. The plumage is a lustrous black, with a greenish tinge, the under-colour slate, shading to white at the skin.

### CHANTECLER.\*

Nomenclature: Chantecler.

Variety: One.

Classification: Dual Purpose.

Colour of Flesh and Skin: Yellow.

Colour of Legs and Feet: Yellow.

Colour of Egg-shells: Tinted.

**Origin.**—This is one of the few breeds which has been deliberately formed with specific objects in view, namely, a heavier type of fowl than those generally met with, suited to winter conditions in Canada, and a small comb so as to avoid frost bite to which larger-combed birds are liable. It was due to the selective breeding of Brother M. Wilfrid, Poultry Husbandman at the Oka Agricultural Institute, La Trappe, in the Province of Quebec. Five well-known breeds were used in its formation, namely, Dark Cornish, giving the small compact comb, White Leghorn and White Wyandotte, for the sake of egg quality, Rhode Island Red and White Plymouth Rock, from which and the Cornish the flesh properties have been derived.

**History.**—In the spring of 1908 Brother Wilfrid mated (1) a Dark

\* Plate LVIII.

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Cornish male with a White Leghorn hen, and (2) a Rhode Island Red male with a White Wyandotte hen. In each of these matings the pullets were white in plumage. The males varied greatly. Those from No. 1 being a dirty white in colour, slight in shape, having neither comb, wattles or earlobes. The latter were white spotted with grey and black. One, however, was a Columbian in colour and type, and fine in other respects. He was kept and mated with the best and whitest pullets in 1909. In the following year the progeny from the above mating were crossed with a White Plymouth Rock male weighing  $9\frac{3}{4}$  lbs., and the next six years by constant selection and intermating the form as now accepted was gradually evolved. At the same time careful attention was given to egg qualities, with the result that in 1916 a magnificent pullet was bred which laid 91 eggs during the four months of November and December, 1916, and January and February, 1917. This, mated with a White Plymouth Rock cock, fixed the type. The breed has been extensively adopted in Canada, and was admitted to the Standard of the American Poultry Association in 1921.

**Economic Qualities.**—These birds are essentially built for production both in respect to eggs and flesh. They are characterised by great vigour of constitution, enabling them to withstand and be productive in spite of the Canadian winter. The hens have proved to be excellent layers under varied conditions, and in a few instances have done well in laying tests. In respect to meat the testimony is that this is of fine quality both in young and old birds, which is a great asset. Those interested in the breed are keeping these factors in view.

**Description.**—Body long, broad, abundant in feathers which are carried closely; fluff short and full; breast deep and well rounded; back broad and long, curving behind; wings rather small, well folded; neck medium length, arched, with abundant hackle; head short and broad, surmounted by a cushion-shaped comb in the male, small, set firm, square in front and rear; in the hen the comb is scarcely seen; beak short and stout; wattles small, well rounded; earlobes small, oval; tail of medium length, in the male with moderate sickles; legs are of medium length, well set apart, and four toes on each foot. In colour the plumage is pure white; combs, etc., bright red; beak and legs yellow. Weight: males,  $7\frac{1}{2}$  to  $8\frac{1}{2}$  lbs.; females, 6 to  $6\frac{1}{2}$  lbs.

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- (1) Popular Breeds of Poultry, by John H. Robinson (Dayton, Ohio, 1924).
- (2) The Wyandotte Fowl (Albany, N.Y., 1884).
- (3) Commercial Poultry (New York, 1901).
- (4) *Country Gentleman* (Albany, N.Y., 1896).
- (5) Profits in Poultry (New York, 1886).
- (6) The Poultry Book, by John C. Bennett, M.D. (Boston, Mass., 1850).





CHAPTER XII  
RACES OF BANTAMS.





## CHAPTER XII

### RACES OF BANTAMS.

Nomenclature : *English, German, Spanish*, Bantam ; *French*, Bantam  
or Naine ; *Danish*, Dvaerghons ; *Italian*, Bantom.

The pleasurable or recreative aspect of poultry breeding has been known throughout the ages. Those engaging in the pursuit for the pleasure of doing so have, as a rule, regarded financial considerations as secondary in importance. They have thus contributed much to the greater knowledge of poultry-keeping, not only in respect to breeds but to methods of control and management. The operations of those in many countries and throughout the ages, who were seeking to meet an inherent call, found in every department of production, for moulding whatever is handled in accordance with their ideals, has had a potent influence. In not a few instances they have thus laid the foundations upon which the entire industry has been erected. What is here stated is exemplified by those who were interested in the sport of cock-fighting from remote times. In later periods, as we have already seen, the chief expression has been through the media of exhibitions. In addition there have always been large numbers of breeders of poultry outside the two spheres named, who have constantly striven to improve, or to modify by selective methods, their birds. In that there has been a moral factor which has been powerful in all civilised countries, using that term in its widest sense, for the reason that no nation can claim its own form of civilisation to be the most perfect.

Whilst almost all races of poultry have been employed in the manner stated above, and principally with breeders to whom cock-fighting did not appeal, the diminutive races of fowls and ducks have been chiefly used. The reason for this is apparent. A large percentage

of those who entered upon this branch of breeding had a very limited amount of space available. There have, however, been many breeders of Bantams whose opportunities were much more extensive. Breeders of Bantams are not concerned with number of birds. They concentrate upon the individuals. Successful accomplishment in their judgment is much greater if one or two birds closely approaching perfection are produced each season, than if a score or a hundred were bred which are inferior in external characteristics. The result has proved to be a powerful factor in extension of our knowledge of breeding. Long antecedent to the time when selection was adopted for the development of economic qualities in the larger races of poultry, it was applied to the breeding of Bantams. This offers an explanation of the remarkable displays at exhibitions wherever these are held. The diminutive fowls and ducks exert a wonderful fascination. The finest specimens usually display a greater perfection of character than do the larger races. Therefore, their attractiveness is almost universal.

Dwarf fowls and ducks have been known for thousands of years. Charles Darwin states (1) that 'A dwarf fowl, probably the true bantam, is referred to in an old Japanese encyclopædia, as I am informed by Mr. Birch. In the Chinese Encyclopædia published in 1596, but compiled from various sources, some of high antiquity, seven breeds are mentioned including what we now call Jumpers or Creepers, and likewise fowls with black feathers, bones and flesh.' Pliny, in the first century of the present era, said 'There is a dwarfed kind of fowls that are extraordinarily small and yet fruitful.' Reference to dwarf fowls was made by Columella, a writer of about the same period. Aldrovandi, in the sixteenth century, described a dwarfed hen, and Willughby, writing in 1678, spoke of a smaller dwarf fowl kept by the curious and called "Grigs." It may be pointed out that this latter term has been at times used in parts of Britain for crosses between bantams and other fowls.

In this connection it is necessary to recognise that there are great variations in the size of poultry, and that the bantam does not differ nearly so much in this respect from the original wild fowl as do many of our modern breeds. The following description of *gallus bankiva*, or *ferrugineus*, is interesting (2): 'The cock measures from the tip of the bill to the tip of the tail about 26 inches; the length of the closed wing







BLACK RED BANTAM COCK

(Bred by Mr. M. Warriner, Junr., 1 Leadenhall St., London, E.C.3)  
1st Prize Dairy Show, 1st and 2nd Specials, Birmingham



JUBILEE INDIAN GAME COCK  
*Photo. A. Rice*

(Bred by Mr. Jack Edwards, Llandilo, Wales)  
Winner Crystal Palace, Olympia, Birmingham, etc.

is from 8 to 9 inches ; the tail measures 15 inches ; the leg or tibia is 4 inches long ; the spur 1 to  $1\frac{1}{2}$  inches ; and the weight of the bird is about  $2\frac{1}{4}$  pounds. The hen is only 1 foot 5 inches long ; the length of the tail 7 inches ; and the wings spread 2 feet. It is seen, therefore, that, assuming the weight of the Leghorn male to be 6 lbs., it shows an increase over the average of the Jungle fowl of 166 per cent, whereas the Brahma male at an average of 11 lbs. has increased by 388 per cent. In the Japanese Bantam, which is one of the heavier of dwarf fowls, the weight of the male is stated to be 26 ounces. Thus the decrease in size is only 10 ounces, or 28 per cent. The deviation, therefore, is very much less in the bantam named than in other races of fowls. One of the chief results of domestication in poultry has been an increase in the size and weight of body. How far the diminution in the case of bantams has been due to methods of selection and breeding it is impossible to state. From experience in other directions we are justified in assuming that dwarf fowls have been known from time immemorial, and that the breeds of Bantams as we know them in these days are, in the first place, the result of natural variations. The same explains the abnormalities characterising bantams introduced from Eastern Asia. In those countries there have evidently been skilled breeders who have devoted themselves to the perpetuation of diminutive types, and to the fixation of abnormalities, as noted in what are termed the Pekin, the Japanese, and the Frizzled races of Bantams. Even though the majority of breeds of bantams have been developed in Western Europe, there can be no question but that the originals came from the far east. Charles Darwin stated (1) that they came originally from Japan. Such information as is available indicates that in earlier ages dwarf birds were bred both in Japan and China. It is possible that these passed from one country to the other. Which was the first is unknown. Within our own time specimens of both the Japanese Bantams and the Frizzled have been imported direct. The Cochins, or Pekins, Bantams were first made known in 1860, when the Imperial Palace at Pekin was captured by the allied English and French armies.

With regard to the term "Bantam" it has been assumed that the first importations were from the town or district of Bantam in Java, Dutch East India, and that it originated there. So far as we



have been able to trace there is no evidence whatever that the first birds brought over had anything to do with the town of Bantam. There is a possibility that dwarf fowls were first noted there by some European traveller, or that the vessel upon which the birds were conveyed to Europe may have called at Bantam, and that it was assumed on the part of the importers these had been obtained at the port named. Erroneous terms of this kind have had in many instances a great advertisement value, and, therefore, have been adopted without justification. On the other hand, the term bantam has been accepted for a long time as representative of something diminutive, whether human or animal. In one of the earlier editions of Moubray (3) this name is used, and it is there stated: 'Bantam, a well-known small breed, originally from India, valued chiefly for its grotesque figure and delicate flesh.' That would indicate the Chinese and Japanese breeds. It goes on to speak of a variety of bantam extremely small and as smooth legged as a game fowl, but gives no description as to colour or shape. A suggestion has been made, although we have not been able to justify it, that the term Bantam is a corruption of the old English words 'Bantling' and 'Banty,' thought to be a corruption of 'Bandling,' that is, wrapping a child in swaddling clothes. Such are also used somewhat contemptuously on anything small, and less so of a young child. It may be, from the fact that a generic name is more valuable in connection with a breed of poultry than one which is merely arbitrary, this fact determined the appellation which is now almost universally adopted. In French, although the designation of Bantam is largely used, the word 'Nain' which means dwarf, is very general as applied to some of the Bantam races.

By reason of their diminutive bodies and that the eggs from them are small, bantams are not kept for their productive values. They have, however, greater merits than commonly attributed. In comparison with the cost of feeding, which is small, the return in eggs and flesh is usually high. The hens of many of the breeds of bantams are remarkably good layers, and without any efforts made to breed specially for eggs. The number of eggs produced is frequently equal to those from pedigree fowls of the larger races. Except in the more heavily feathered bantams the same is true in respect to flesh. These birds by their activity of habit develop a considerable amount of







INDIAN GAME BANTAM COCK  
(Bred by Mr. A. H. Brownson, Lutterworth Rd., Nuneaton)  
Winner of many prizes



INDIAN GAME BANTAM HEN  
(Bred by Mr. A. H. Brownson, Lutterworth Rd., Nuneaton)  
Winner of many prizes

*Photos, Chettle*

muscle which is, as a rule, very abundant relatively to the size of body, and of high quality. In Belgium, prior to the Great War, the policy adopted was to encourage those living in urban and industrial areas to keep bantams. The reasons given were that these birds do not annoy neighbours to the same extent as do larger fowls, and that, as the eggs produced by them would be of small value for sale, the children of the households concerned would thus be supplied with a highly nutritious article of food. Belgium is one of the most densely populated countries in Europe. In the towns and industrial areas land is not easily secured for development of poultry-keeping on commercial lines. The feeding of the birds would be largely provided by the household scraps, so that the cost would be negligible. In addition the pleasure of breeding so evident in the Low Countries would be thus gratified.

As already indicated it is probable that the first bantams were brought from India or South-eastern Asia, when, is unknown. In the latter part of the eighteenth century, and the earlier years of the nineteenth century, dwarf fowls were known. About that period Sir John Sebright undertook the task of developing what is termed the Sebright Bantam, of which more is said below. From that time onwards all the literature dealing with races of poultry which has come under notice, mentions bantams, mainly at first of the black and white and rose-combed breeds. With the advent of the exhibition system a great impetus was given to the breeding of these birds, more especially in the industrial areas, where they provided a healthy recreation, and a new interest, for many artisans and others. In the 'fifties and 'sixties of last century there arose a considerable number of men who devoted themselves to bantam breeding, and to whose skill we owe the wide range of varieties. A considerable proportion of the larger races of fowls are now met with in diminutive form. Such developments were chiefly in evidence in Britain, Belgium and Germany. Whilst the breeding of some types of bantams has become popular in North America, these small birds do not enter into exhibitions to the same extent as in European countries. It has been the privilege of the Author to know many of the most successful breeders of bantams in Europe, and to watch more especially in respect to the work of the late Mr. W. F. Entwisle, who was responsible for the



evolution of more breeds of bantams than any other man, their development. That gentleman's skill and patience were phenomenal. In some instances he spent ten years in perfecting a new breed. He was one of the greatest breeders of his day.

### GAME BANTAMS.\*

Bantams are divided into two sections, first of which is that which includes diminutive breeds of Game fowls. In this are found both the Old English (or fighting) Game and the Modern (or exhibition) Game, exhibiting to a remarkable degree perfection of colour and of type, and with the courage and pugnacity which characterises the larger fowls. With a few exceptions Variety Bantams are the result of crossing, whereas the Game Bantams have mainly been produced by selection, and they are, therefore, purer in blood. The breeds recognised are :

|                     |           |
|---------------------|-----------|
| BLACK-BREASTED RED. | RED PYLE. |
| BROWN-RED.          | WHITE.    |
| GOLD DUCKWING.      | BLACK.    |
| SILVER DUCKWING.    | WHEATEN.  |
| BIRCHEN.            |           |

### VARIETY BANTAMS.

These include all breeds and varieties not included in the former class, of which the following list is complete :

|                                      |                |
|--------------------------------------|----------------|
| ANCONA.                              | HAMBURGH.      |
| ANDALUSIAN.                          | INDIAN GAME.   |
| ASEEL.                               | JAPANESE.      |
| ANTWERP BEARDED (Barbu<br>d'Anvers). | LEGHORN.       |
| BOOTED (Black and White).            | MALAY.         |
| BRAHMA.                              | MILLEFLEUR.    |
| COCHIN (or Pekin).                   | MINORCA.       |
| FRIZZLE.                             | PLYMOUTH ROCK. |
|                                      | POLISH.        |

\* Plates LX. to LXIII.





JAPANESE BANTAM COCK

(Bred by Major G. T. Williams, Perranwell, Cornwall)

*Photo, J. H. Scott*



JAPANESE BANTAM HEN

(Bred by Major G. T. Williams, Perranwell, Cornwall)



PORCELAINE.

SEBRIGHT.

RHODE ISLAND RED.

SPANISH.

ROSE-COMB (Black and  
White).

SUSSEX.

SCOTS-GREY.

WYANDOTTE.

YOKOHAMA.

The aim on the part of breeders of those types which are duplications of larger races is to adopt the same standard in all respects except size of body, in which respect a considerable amount of success has been attained, though in some the process is yet to be completed. Those which are individual and distinctive are briefly noted below.

**Antwerp Bearded.**—Of these there are three principal colours, Black, Cuckoo, and White, though others are in process of development. The body is broad, short, and deep, set on short legs which are clean; neck rather long, well arched, and thickly covered with hackle; the head is large, the beak short, with prominent eyes and eyebrows; comb of rose form with spike behind; the face is muffled with long feathers which slope backwards, and with the whiskers form a collar. There is also a variation from this to which the name *Uccle Bantam* has been given, differing principally in that the birds have heavy hocks and leg feathers. Both classes have a graceful upright carriage.

**Booted.**—It would appear that these birds are related to the Japanese Bantams as indicated by the profuse leg and foot feathering, the large tail carried almost upright, the large wings, and short, compact body. Mr. W. F. Entwisle (4) and other writers suggest that they are of very ancient origin and have been known for centuries. The two leading varieties are the White Booted and the Black Booted, both of which are remarkable for the depth and brightness of the plumage colour. Spangled Booted have also been seen occasionally.

**Cochin (or Pekin).**—This has always been among the more popular of the heavy-feathered Bantams. It is bred on similar lines to the Cochin, except that it appears to be relatively shorter on the leg. As already mentioned it was first brought from Pekin. The accepted colours are: Black, Blue, Buff, Cuckoo, Partridge, and White.

**Frizzle.**—These birds also come to us from Japan. They appear to be closely allied to the Japanese, differing in that the feathers curl

backwards. There is a great diversity in colours. The frizzling or curling of the feathers is the main consideration.

**Japanese.**—Although we have not been able to trace any record as to the introduction of this breed, it would appear that it was in the mid years of last century when intercommunication with Japan became more general and its age-long exclusion of the foreigner began to weaken. It is grotesque in the extreme. Its short, deep body, very short legs, long wings carried very low, very large tail well spread, carried almost lying on the back, and big single-comb, is a strange combination. It differs from the Cochin in that it is not feathered on the legs and feet. The colours are : Black, Black-tailed White, and pure White.

**Millefleur** (thousand flowers) and **Porcelaine** may fairly be characterised as two of the most beautiful breeds which exist, and apparently originated in Germany. Our view is that the Porcelaine has no compeer in delicacy of colour and of markings. These birds must be seen to realise their beauty. The Millefleur has a variety of colours in the plumage, inclusive of mahogany and orange-red, chamois, gold, and black. The distribution over the body of black spots and of white triangles at the tips of the feathers is very striking, more especially when the ground colours are brilliant. In the Porcelaine there is the same marking. In this breed a delicate light straw predominates on the body and hackles, with a large amount of blue-grey, in some cases with a fine edging of the light straw. The whole gives the appearance of the most delicate china to which the name of porcelain is given in that material.

**Sebright.**—As already mentioned this breed is more than a hundred years old, and was evolved by Sir John Sebright, who set himself to, and succeeded in producing a male and female of indentical colour and markings, the former to be hen feathered, that is, without neck and saddle hackle, or sickles in the tail. This was accomplished by very close in-breeding after several years of effort. The effect was seen in loss of fertility, and in difficulty to rear the chickens, which continues to the present day. Only those who are prepared to obtain the minimum of results with the maximum of effort, and to spend money freely in the doing so, and they are few, find the Sebright worth breeding. There are two colours, Gold and Silver.







WHITE FRIZZLE BANTAM COCK  
(Bred by Major G. T. Williams, Perranwell, Cornwall)  
Poultry Club Cup, etc.



BUFF LACED POLISH BANTAM HEN  
(Bred by Major G. T. Williams, Perranwell, Cornwall)  
1st Special Olympia  
Photo, "Feathered World"

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CHAPTER XIII  
EVOLUTION AND CLASSIFICATION  
OF BREEDS.



## CHAPTER XIII

### EVOLUTION AND CLASSIFICATION OF BREEDS.\*

Although it is impossible to submit evidence in proof it may be accepted that each breed of the four species of poultry, namely, fowls, ducks, geese, and turkeys sprang respectively from the same ancestors. The diversity now seen is due, in the first place, to what is termed natural selection, in which is included change of conditions. Most potent, however, has been artificial selection. Size of body, increased productivity, coloration of plumage, and special characters as seen in domesticated races, are in many cases unknown in the wild birds. As a consequence, there is a constant tendency of reversion to the original, and to variability. The same forces are at work among wild poultry, though to a lesser degree. The process of evolution is one of continual change. That is true, when birds and animals are living under more or less natural conditions. It is so to a greater extent following upon alteration in habits of life and change of food, when these are brought into the service of man.

**Use and Disuse.**—It is found by studying the structure of our domestic animals that there are parts of the body and organs which apparently are useless, whilst there are others that are more fully developed than in the wild progenitors. The explanation of these changes is that under one set of conditions there are demands upon the system not experienced in others. Unless an organ or muscle or limb is not used the tendency is to become atrophied. On the other hand, with greater use, if not excessive, usually is found increase of size and vigour. The late Charles Darwin said : (1) ‘ It is notorious that increased use or action strengthens muscles, glands, sense organs, etc. and that disuse, on the other hand, weakens them. It has been experimentally proved by Ranke that the flow of blood is greatly in-



creased towards any part which is performing work, and sinks again when the part is at rest. Consequently, if the work is increased the vessels increase in size, and the part is better nourished.'

**Habits of Life.**—The change of habits of life increases variation, in which respect there is a marvellous power of adaptability in the races of poultry. These races, generally speaking, originated in the hotter zones. Distribution of fowls has chiefly been due to man. That of ducks, geese, and turkeys, in the first place, was by natural migration. Animals in their wild state are compelled to search for food, expending a large amount of energy in so doing. They have, moreover, to fight for existence. Thus the size of body is not increased. Under domestication their needs are abundantly provided for with a limited amount of effort. Hence an accretion of size in many instances. The effects of altered conditions at times appear to impose an undue strain upon the powers. In others there is manifested a decided stimulation. Nature, however, has a marvellous recuperative power. Generally speaking, within a comparatively short time the balance is restored, and the newer habits of life prove beneficial.

**Correlative Variability.**—Why one part of the body should be influenced by changes in another has never been explained. Darwin says : (1) ' In cases of true correlative variation we are sometimes able to see the nature of the connection ; but in most cases it is hidden from us, and certainly differs in different cases. We can seldom say which of two correlative parts first varies and induces a change in the other, or whether the two are the effects of some common cause.' Since the great naturalist wrote much has been learnt. It is evident that changes in productivity whether of meat or of eggs induce changes in characters. This question is dealt with in a later chapter. What is here stated does not apply to what are called Mutations, that is, sudden and distinct departures from the original type and form. Only one example of the former need now be referred to, namely, the increase in size of comb which results from greater egg-production.

**Change of Conditions.**—As already indicated domestication in some directions reduces the strain upon the system, though in others there is an increase. Both tend to greater variability. The material which would otherwise be used in maintaining the body, and the absence of a greater amount of exercise, must be used in some other way. This





GALLUS PATAINUS

From drawing by Ulysses Aldrovandi (A.D. 1599) in University of Bologna, Italy



is found in every department of animal and plant life. If it were not so, and the relative edible products thus increased, the needs of man would not be met to the same extent. The present population of the earth could not be supported without intensity of cultivation and breeding.

Many of the variations which are seen in the type of poultry, and in their relative productivity, are the result of changed conditions. 'It is a well-known fact that change of soil and climate effect perhaps as great a change in the constitution as would result from an infusion of fresh blood.' (1) The change is not, however, always beneficial. Generally speaking such changes are stimulating, even though at times the effect is temporary. Experience has fully justified the statement of a writer in the *Gardener's Chronicle and Agricultural Gazette* (1850): 'Nothing can be more clearly established in agriculture than that growth of any one variety in the same district makes it liable to deterioration either in quality or quantity.' Frequently where fowls are kept upon the same land for several years, even where man-urial taint in the soil is avoided, the measure of success realised at first is not maintained. If fresh stock is introduced these are found to grow better and are more productive. Credit is often given to the fowls which does not belong to them, as the success achieved is due to the new conditions. Interchange of environment is important. The advance in egg-production and in meat qualities, seen when poultry are removed from one country to another, may be attributed in many instances to the stimulus met with under the new conditions.

In this connection what was suggested by Darwin has been abundantly proved in practice, namely (1): 'It is a law of Nature that all organic beings should occasionally cross, but it appeared to me probable that the good derived from slight changes in the conditions of life from being an analogous phenomenon might serve this purpose. No two individuals, and still less varieties, are absolutely alike in constitution and structure, and when the germ of one is fertilised by the male elements of another, we may believe it is acted on in a somewhat similar manner to an individual when exposed to slightly changed conditions.' Many poultry keepers, when they are purchasing fresh stock, buy them as near home as possible to save themselves trouble. That is not always desirable, and it is wise to ensure

that such birds shall be obtained from diverse conditions, as in this manner much can be accomplished to minimise whatever disadvantages which arise from domestication.

**Food.**—As a general principle it may be accepted that whatever is grown in any country is most suited to the animals which are bred there. Also, that what may be most valuable under one set of conditions may not be equally so elsewhere. In these days there are those lands which must import supplies to meet their requirements. Such may have an influence in respect to variation. If a family of poultry has been kept under one set of conditions and fed more or less upon the same class of food, removal elsewhere may bring about variations which cannot be accounted for. Moreover, the use of artificial and non-natural feeds raises problems which require exhaustive research for their elucidation.

**Altitude and Pastures.**—The elevation of ground has an influence upon size of body, apparently varying in accordance with the conformation. It is generally found that the larger breeds of cattle and sheep are almost without exception found upon the richer pastures of plains and valleys, whilst the smaller, hardier animals are met with in the hilly districts. The same is true as to poultry. It is desirable, therefore, that study should be given to altitude and to nature of the soil, as also to climatic influences. Variations in these explain changes in poultry, why some breeds fit one set of conditions better than another. Mr. Primrose McConnell in "Agricultural Geology," points out that where similar conditions prevail, even though great distances apart, the stock which thrive best are almost uniform. He says that (2) 'We find on the American continent, on the prairies, a region of land very similar to Eastern Europe, and this similarity tends to wipe out the differences between breeds. British breeds have a tendency there to lose their characteristics, and would in time, if allowed freedom, revert back to some common form when continuously bred under one set of geological surroundings.' The British Isles and a few other countries provide a wide variation in natural conditions, inclusive of altitude and natural food, which explains to a considerable extent the great diversity of breeds of all classes of stock there met with. Under such conditions there are considerable variations in temperature and climate, which indicate the



importance of these factors in respect to choice of breeds and the branches of poultry-keeping to be followed. Where the natural conditions are diversified there is bound to be variations in both these directions.

**Soil.**—The nature of the soil in any area influences animals and plants existing thereon, and, together with the atmospheric conditions, must be considered in relation to breeds selected and methods adopted. For the claim which has been made that eggs produced upon ironstone yield richer-coloured yolks than elsewhere there appears to be justification. Also, that the nature of soil influences the coloration of plumage in birds, though to a much lesser extent. The colour of legs and flesh is primarily due to natural causes, as are the structure and the bone formation. Selective breeding, as a rule, merely fixes modifications that have been introduced naturally. Mr. McConnell, speaking of the horse, says (2): ‘Within the last 1,000 or 1,500 years there has sprung up such a diversity of breeds within our islands as cannot be matched elsewhere on the surface of the earth on an equal area. That the complex geological structure of these islands is at the bottom of this divergence is the belief of the present writer.’ What is here stated is true with poultry to an even greater extent.

The tendency of light, dry soils is to bleach the legs and flesh, and of heavy soils containing a much larger amount of moisture, is to deepen the colour of both. In some instances, however, there is met with a combination of dark legs and white flesh. Our attention was first called to this question many years ago by the experience of a well-known exhibitor of Plymouth Rocks, who had lived for a considerable time on the heavy flat lands of East Essex by the sea. His birds were famous for the coloration of the legs. He afterwards removed to the hilly section of Surrey, where the land was light and porous. The result was that the birds which had been brilliant in leg-colour became pale yellow. Only in so far as he was able to keep them upon lower lying, moister land could he retain the colour satisfactorily for the exhibition pen. This instance has been confirmed by wider and more extended observations. In selecting a breed, and consequently branches of production, the nature of the soil is a most important point for consideration. It is essential that the class of fowl shall conform to the conditions under which it is kept. A striking fact is that



although the heavy clay lands of Essex are within fifty miles from the lighter and more porous areas of Western Kent, separated therefrom by the River Thames, chickens take three to four weeks longer to grow to a killing size upon the former than the latter, and the flesh has not the soft nature and fine quality found in the latter case. It is not so much latitude as the quality of the soil. Dorkings thrive excellently and attain early maturity in Scotland and Northern Ireland, where the conditions in respect to soil are favourable, more so than in some parts of Southern England.

**Effect of Soil upon Growth.**—Additional to what is stated above is the question of position. Land facing south, and having a slope of, say,  $30^{\circ}$ , absorbs a much greater amount of heat than is the case under other conditions. A northern slope at the same angle is at least  $3^{\circ}$  F. colder than the former, depending upon the nature of the soil. Whilst heat and cold are to a large extent atmospheric, yet there is a great difference in the temperature of the ground itself, the result of its nature and formation. Mr. McConnell says : (2) ‘ The difference in temperature of soils due to mere wetness or dryness is considerable. Schüßer found that the average of twelve soils gave a temperature of  $100.5^{\circ}$  F. in the wet state, as against  $112.5^{\circ}$  in a dry state, showing a difference of  $12^{\circ}$  F.’ Damp soil is less suitable for fowls, though good for ducks, provided precautions are taken that the birds have dry sleeping quarters. Heavy clay land is most suited to egg-production. It is only upon the medium and lighter soils that the raising of high-class table chickens should be attempted. It is essential, therefore to ensure that the breed selected shall be conformable to the local conditions. Mr. McConnell says : (2)

“ Sandy or gravelly soils absorb heat more rapidly and retain the heat longer than loam or clay do, and are therefore reckoned warmer and ‘ earlier ’ soils. Dark-coloured soils absorb more heat than light-coloured ones, so, therefore, peaty and humous soils are warmer and earlier than whitish, chalky soils. The more moisture in a soil, the more of the sun’s heat is used in warming up and evaporating this water, so that the temperature of the soil itself will be raised more slowly, and it will cool proportionally more quickly ; therefore, damp soils are cold and ‘ late.’ The aspect of a soil, as facing south against facing north, will much affect the amount of the heat received from





GALLUS TURCICUS

From drawing by Ulysses Aldrovandi (A.D. 1599) in University of Bologna, Italy



the sun, taking either any day of any season or the whole year. The inclination of any field will influence the amount of heat received from the sun ; a plain will receive less than a sloping field inclined to the south, and a slope to the north least of all."

Speaking generally, fowls with white flesh thrive best on light soils ; those with grey flesh and legs on medium soils ; and those with yellow flesh and legs on heavier soils. As a rule the finest eggs are produced on heavier lands, and where moist atmosphere, especially if within range of the sea, induces richness in and abundance of herbage. Sandy soil is not so favourable for poultry, although dry, due to poverty of herbage and natural feed. Herbage upon any soil determines its value for stock. Unless it is rich enough to produce plant life of good quality, it is less suitable for poultry.

**Natural Selection.**—The tendency to variation has been, and is, much greater under domestication than where the birds are in a wild state. A process of natural selection has been at work throughout the ages, and is increased by change of conditions and food. When fowls have become acclimatized, and adapted themselves to their new conditions, within each area there is a tendency to the development of a general type, determined to a considerable extent by 'survival of the fittest.' This is not restricted to plumage. It applies equally to size and structure of body. What is here stated explains why at one time over wide areas, and where selective breeding and production had not been adopted, nearly every country or district had fowls of a common and very uniform type. Where the same climatic and soil conditions apply over an extensive area, variations from that type are few. In diversified countries they are more numerous. The fowls called 'barn-door' or 'commune' served the purpose until increase of population and greater need compelled adoption of other methods, and man, for his own purposes, adopted what is known as artificial selection. To the former is due the similarity of types met with over large areas in Asia, in Eastern and Southern Europe, and in America.

**Artificial Selection.**—With the bringing of poultry under the control of man a new influence was introduced, to which the name 'artificial selection' has been given—that is, the arbitrary mating of birds with a view to the perpetuation and improvement of specific characters and qualities. In earlier days selection was necessarily

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limited, primarily in respect to pugnacity for fighting and increase of productivity. Coloration of plumage was a minor question, and variation in that direction small. With changes of conditions, and transference from one country to another, marked differences became speedily apparent. When birds were selected for killing, those were chosen which did not show the special characters or qualities desired. Thus a beginning was brought about making for increase of distinct types. Selection was at first in two directions: first, for qualities contributory to success in fighting—namely, courage, strength of bone, size of wing, and general vigour; and, second, quiet disposition, abundance of flesh, egg-production, and general acceptance of the restraints of restricted conditions. These latter were often antagonistic, and development was unequal. That named first was the earlies.

As breeding became more intensive, there entered personal predilections for specific forms. Natural selection and the variations resultant from distribution became the basis. Without such variations artificial selection would have been practically impotent. The former produced a few general types. To the last named we owe the vast number of races and sub-races, following upon minor changes due to transference from the primary environment to others.

**Crossing.**—With the adoption of selective breeding and greater uniformity, and most of all as intensive methods were adopted, there has been an ever increasing tendency towards loss of vigour. That has been avoided by what is termed crossing, namely, the intermixture of breeds and varieties. From not a few of these crosses new and most valuable breeds have sprung. If we could trace each breed to its original source it is probable that not more than two or three races of fowls can claim direct descent from their progenitors. And the number of ducks, geese and turkeys would be fewer. Crossing is, therefore, one of the most potent influences which make for variation. Birds in which there has been a cross frequently show a tendency to uncertainty of type, etc., depending upon the length of time which selective breeding has been applied. As the majority of our breeds have—more rightly than wrongly—had an infusion of alien blood within a few generations, this is liable to show itself, especially where



there has been change of environment. When variations are noted in chickens it is often thought to be an indication of impurity of race. Such need not be the case at any recent period, even if at all. It is remarkable how long an influence of this nature will persist, showing itself unexpectedly. Any breeder of poultry expecting that in buying birds or eggs for hatching he is securing absolute purity, using this term in the chemical sense, is looking for the impossible. As Darwin says : (1) ' How long this influence will last depends upon the difference in the strength or prepotency of transmission in the two parent forms, on their actual amount of difference, and on the nature of the conditions of life to which the crossed offspring is exposed. But we must be careful not to confine these cases of reversion to characteristics which were given by a cross with those in which characteristics originally common to both parents, but lost at some former period, re-appear. For such characteristics may recur after an almost indefinite number of generations.' Crosses have a practical value as noted later. We are here concerned with their influence on the evolution of breeds and varieties.

**Modern Breeding.**—Although poultry have been known and their value for supply of food recognised since long before the Christian era, it is within the last century that breed definition has been adopted generally. Prior to that time, except among breeders for the cock-pit, very little attention was paid to selection other than the natural, or attempts made to form new races.

If we were able to trace the descent of the Game fowl, and especially those met with in India and other parts of Asia, it is probable that these would show pedigrees that would put to shame the genealogical table of the bluest-blooded noble of Europe. A Roman or Saxon or Norman ancestry would be short as compared with it. Until two or three hundred years ago all fowls were classified together. Save, in one or two minor instances, the attempts at description are meagre in the extreme. Columella, the Roman writer, speaks of fowls found in Italy with five toes, giving a slight outline of their appearance. Descriptive dealing with domestic animals does not seem to have been thought of. Man appreciated new species or forms less than we do new varieties. His attention was concentrated upon other and, to him, more momentous questions. Until what is termed 'fancy'



entered into such pursuits external characteristics were disregarded, and economic qualities were supreme.

One of the earliest books dealing with fowls was Sir Anthony Fitzherbert's 'Boke of Husbandry,' published in 1532. In it nothing is said as to breeds. A hundred years later (A.D. 1631) was published Gervasse Markham's 'Cheap and Good Husbandry for the Well-ordering of all Beasts and Fowls,' in which prominence is given to domestic poultry. Only a brief description is given of the Game and the 'dunhill cocke.' As to the latter it is stated that his colour should be red. In Gent's 'Systema Agriculturae,' published in 1675, the keeping of fowls for profit is advocated, and advice given as to management, but it contains no description of the different breeds. In 1705 was issued Mortimer's 'Whole Art of Husbandry,' wherein is mentioned that several sorts existed. He does not, however, say what they were. Early in the eighteenth century a French work was published, 'The Art of Hatching and Bringing up Domestic Fowls of all Kinds, at any Time of the Year, either by means of Hot-beds, or that of Common Fire,' by M. de Réaumur, of the Royal Academy of Science at Paris, dealing chiefly with artificial incubation. Our copy is an English translation (1750). Several distinct kinds of fowls are mentioned, but no list is given.

In 1815 was published 'A Practical Treatise on Breeding, Rearing, and Fattening all kinds of Poultry, etc.,' by Bonington Moubray, which contributed greatly to the development of poultry breeding upon more definite lines. Between 1815 and 1850 nine editions were issued, and a revised and extended edition in 1854. It was the first attempt to accord to poultry anything like the prominence it deserved. It is, however, very sparse in many of its details. The illustrations were very crude. The races were numbered as follows, though it is evident others were known: fowls, 12; ducks, 4; geese, 1; turkeys, 3. In the previous year (1814) 'The Cocker,' by W. Sketchley, was issued. In that upwards of twenty varieties of the Game fowl are named. 'Poultry, their Breeding, Rearing, Diseases, and General Management,' by Walter E. Dickson, was published in 1838. It marks a distinct advance on all works dealing with this subject up to that date, although in respect to breeds, the importance of which had not been recognised, was very scanty. The races named by him number: fowls, 19;





GALLUS PERCICUS (Rumpless)

From drawing by Ulysses Aldrovandi (A.D. 1599) in University of Bologna, Italy



ducks, 3 ; geese, 3 ; turkeys, 3. Dixon's book was issued in 1848, and he was the first to attempt a division of the breeds, almost entirely, however, in respect to size of body. He enumerates the following number of breeds : fowls, 22 ; ducks, 7 ; geese, 5 ; turkeys, 4. It was about this time that the exhibition system was introduced. That changed the whole aspect of affairs. In 1853 the first attempt was made to deal with poultry in an exhaustive and complete manner. This was in Wingfield & Johnson's 'Poultry Book,' which, though largely devoted to the Shanghai fowl, other breeds are dealt with. The number of breeds named in it are : fowls, 34 ; ducks, 8 ; geese, 4 ; turkeys, 5. About the same time other books were brought out, as already referred to. Within fifty years the number of recognised races of fowls had increased from twelve to thirty-four ; of ducks from four to eight ; of geese from one to four ; and of turkeys from three to five. The majority of these additions were due to the importation of races previously unknown in Britain, but existent elsewhere. With the uprise of exhibitions the earlier steps were in the direction of fixing and improving existent breeds. Later efforts were put forth to introduce new forms by combination of existing breeds and of further varieties of breeds.

**Results of Domestication.**—That the bringing of poultry under domestication has resulted in great changes is evident. As already indicated these are seen in the evolution of different and distinctive types and in coloration of plumage, as well as secondary characteristics. There are others which concern the practical or productive qualities, namely :

*Size of Body.*—The Jungle-fowl (*G. ferrugineus*) is a small bird, weighing about 3 to 3½ lbs. It speedily increases in weight when domesticated, even though not selected for greater size. As a rule when tamed it ranges from 5 to 6 lbs., unless breeding for greater weight is adopted. The majority of our larger races of fowls have been based upon races bred for centuries in Eastern Asia, from which it is evident that breeding for size has been general in China, Malaya and the adjacent countries. Small breeds are also found in those regions, due to specialised breeding, notably in the case of bantams. In ducks and geese similar increase in size of body has followed domestication. With turkeys that has not been the case.

*Fecundity.*—Production of eggs under natural conditions is an exemplification of what is the first law of nature, namely, perpetuation of the race. Generally speaking the wild hen forms, as a rule, two nests in the year, and lays a total of twenty-two to twenty-six eggs, within a limited season. Under domestication there is a marked increase in fecundity, more in some races than in others. Much of the advance made during the last half century has been built upon breeding from hens, and from their male descendants, in which this quality was expressed to the greater extent. So far as records are available there have always been some hens which were more prolific than are others. Individual hens have been known to produce upwards of 300 eggs per annum, and flock averages are approaching 200 eggs in the first pullet year. The influences which have led to these results, apart from mutations and continuous selection, are: protection against adverse influences by housing, shelter, and avoidance of undue exercise; more abundant supply of food, and of a nature stimulating the egg-organs; selection and mating of those birds that have proved to be the best layers; and removal of eggs from the nests as these are laid. Of these, though all are contributory, the last named appears to be the most potent. A hen lays to perpetuate the race, not to supply food to man. Removal of the eggs postpones development of the brooding instinct. She has ability to produce more eggs so as to complete her nest. That is seen with all classes of birds, wild and domesticated. The continuation of this process varies. In some races it is limited; in others extended enormously. Further, changed conditions frequently induce increase in productivity, as does transference from South to North in the Northern Hemisphere, and vice versa in the Southern. Nearly all migratory birds form their nests in the colder areas. It has often been found that transported fowls are more productive in a new than in their native habitat. Change in this respect is frequently very stimulative.

*Suspension of the Maternal Instinct.*—There is an increasing number of races of domestic poultry which are unreliable as or are non-sitters. Such are those which have proved themselves to be the best layers. Increase in the number of eggs laid postpones the brooding desire in the first place, and in a number of races has led to its suspension. The disuse of any function, as any part of the body, leads to weakening,



and to suspension. That is the reason why broodiness is not altogether eliminated in what are known as non-sitting races, as it frequently crops out. It could be rapidly restored to these.

*Loss of Vigour.*—The adaptability of all species of poultry is remarkable, as is the retention to the power to produce far beyond what is natural to the race. Change of conditions generally compensates for loss of liberty, as does rigid selection for constitutional vigour. To these influences, however, there are limitations. That domestic fowls are less hardy than those in a wild state cannot be controverted, due to breeding and rearing under unnatural conditions, to continuously close breeding without the natural elimination of those which are weaker, and to the use as stock of those specimens which, in respect to vigour of constitution, are the least fit, even though these may possess racial characters to the highest degree, or are highly productive.

The first three of the above results are arbitrary qualities, which can alone be maintained by careful selection and breeding. Such qualities would speedily disappear without constant selection. The late Professor Drummond pointed out that (3) 'The highest part is the latest added part, and the latest added part is the least secured part.' Reversion is a potent factor in all breeding.

**Tendencies in Selection.**—An interesting study is that of distribution of breeds and varieties, and of the measure of popularity attained. So long as breed values were unrecognised no impelling reason was manifest for adding to these. Where distinctive types were evolved as a result of natural influences and conditions, such were not rigid and displayed much in the way of minor variations. With breeding to some extent for the sport of cock-fighting, in the later years of its popularity, the importance of distinctive breeds and varieties became apparent. As a consequence the number of these increased. When the exhibition system was introduced, especially as what has been termed the Cochin Mania ran rampant throughout Britain, there was inaugurated a fundamental change. From then onwards there has been a constant increase in the number of breeds and varieties of poultry, either by importation or combination of existing races or by the fixing of variations as these made their appearance. That has had a powerful influence. The gain has been un-



doubtedly great. Many of the new forms had a brief career. They did not commend themselves, or were lacking in practical values. Others proved to be more productive than existing breeds, or gave an opportunity for skill in breeding on the part of exhibitors which was exercised in perfecting their characteristics, sometimes at the expense of what was of greater importance. Exhibitions tend to augmentation of the number of breeds and sub-breeds. It is a striking fact that of the four most popular breeds of fowls at the present time three, namely, the Leghorn, the Rhode Island Red, and the Wyandotte, were unknown in Britain in 1870, and the other, the Sussex, had almost been lost. The exhibition system has fully justified itself in this manner.

The reverse influence is apparent in connection with productive breeding, that is, the adoption of Commercial Poultry Husbandry as an economic pursuit. Instead of the mongrelisation which was common owing to the practice of farmers year by year introducing male birds of different breeds, the tendency is to restrict the classes of fowls and other poultry, met with in given areas to one or at most two breeds. That there are manifest advantages in adoption of such restriction is apparent. It ought to lead to uniformity of product. What is here stated was emphasised by the Author some years ago as follows : (4)

‘Indiscriminate racial selection is, generally speaking, a mistake. A measure of uniformity of the fowls met with over a given area, where the environment is equal, is natural, provided, of course, that the breed or breeds are suitable thereto. France built up her poultry industry in this manner, and later observations have confirmed the wisdom of so doing. Nearly all the most successful developments of recent years have been on these lines. Egg-production in Denmark, at Petaluma in California, in the State of Rhode Island, and in Australia ; table poultry in South-Eastern England, in Buckinghamshire, in various departments of France, in East Flanders, and in the South Shore district of Massachusetts, have, in each individual instance named, mainly been with one breed, modified here and there by introduction of a second. It may be pointed out that, when such is the case, it is much easier to appreciate the racial values, and a single breed is capable of more rigid and careful selection, generation after generation,

than is possible when all sorts are found in a district, whilst the introduction of fresh stock of a high quality is made much easier.' It is necessary, however, to bear in mind that as methods are intensified the dangers of exhaustion are increased, and that, as has been seen in some instances, a time may arrive when the breed should be substituted by another. Hence the part which exhibitors have to play in evolving or introducing new forms. Breeders in these days possess great advantages in that the dissemination of certain races over wide areas and in many countries, enables them to obtain fresh blood and thus maintain the virility of their stock.

**Classification of Breeds.**—The division of breeds into various distinctive classes in our work on "Poultry Keeping as an Industry for Farmers and Cottagers," in 1891 has been generally adopted in the absence of a better method. It is :

#### *Fowls.*

1. Egg-producing races.
2. Flesh-producing races.
3. Dual purpose (egg and flesh) races.
4. Ornamental races.

#### *Ducks.*

1. Egg-producing races.
2. Flesh-producing races.
3. Ornamental races.

#### *Geese and Turkeys.*

All are bred for flesh, not eggs, except for reproduction.

The terms used above mean that, whilst the egg races carry some flesh, and in several instances a considerable amount, the main profit is derived from the eggs laid ; that in the flesh races the eggs would not be in sufficient number, as compared with the flesh, to compensate the breeder ; and that in the Dual-purpose races, whilst not so great in either direction as in the two first named sections, the return between the two is satisfactory. So far as ducks are concerned, at one time flesh was the all-important quality. During recent years



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there has been a great increase in those breeds which are characterised by high fecundity.

In view of the fact that descriptions of breeds and varieties are given in previous chapters, it is only necessary to give lists of such as are most popular in the various classes for reference. These are (in alphabetical order) :

*Egg-producing Races of Fowls.*—Ancona, Braekel, Campine, Humbergh, Houdan, Leghorn, Minorca, Old English Pheasant, Redcap, Scotch Grey.

*Flesh-producing Races of Fowls.*—Bresse, Dorking, Game, Cornish (Indian) Game, Malines, Parasio, Sussex.

*Dual-purpose Races of Fowls.*—Barnevelder, Faverolle, Chantecler, Croad Langshan, Orpington, Jersey Black Giant, Plymouth Rock, Rhode Island Red, Wyandotte.

*Ornamental Races of Fowls.*—Of these the number is legion, inclusive of large and small bodied breeds. In the former are many that were at one time very popular, such as Brahmas, Cochins, Black Spanish, etc. Also others which, whilst they have never attained great favour, have had a value for crossing. Among the smaller races are Game and Variety Bantams.

*Egg-producing Races of Ducks.*—Khaki Indian Runner, Orpington, Pekin, Campbell.

*Flesh-producing Races of Ducks.*—Aylesbury, Pekin, Huttegem, Rouen, Blue Termonde, Blue Swedish.

*Races of Geese.*—Embsen, Pomeranian, Roman, Toulouse.

*Races of Turkeys.*—American Bronze, Black, Cambridge Bronze, Narragansett.

## CLASSIFICATION OF RACES OF FOWLS.

### LAYING OR NON-SITTING RACES.

In the races referred to in the following table the maternal instinct is almost, if not entirely, suspended, in many cases owing to artificial selection for breeding. It is, however, merely dormant, and individual hens become broody. The majority of these races are medium, in some instances, small in body, are active in habit, quick in growth, and, without exception, are layers of white-shelled eggs which vary



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considerably in size. Efforts have been put forth to combine the production of brown or tinted-shelled eggs with non-sitting, but without success except in first crosses.

|                     |                           |
|---------------------|---------------------------|
| Ancona.             | Landhen, Danish.          |
| Andalusian.         | Leghorn.                  |
| Bearded Thuringian. | Magyar.                   |
| Bergische Crower.   | Minorca.                  |
| Braekel.            | Moeven.                   |
| Campine.            | Old English Pheasant.     |
| Castillian.         | Pavloff.                  |
| Coveney White.      | Polish.                   |
| Crested Dutch.      | Polish Greenfoot.         |
| Caumont.            | Ramelsloh.                |
| Caux.               | Redcap.                   |
| Du Mans.            | Russian Dutch.            |
| Exchequer Leghorn.  | Schlotterkamin.           |
| Friesland.          | Sicilian Buttercup.       |
| Hamburgh.           | Spanish, Black.           |
| Herve.              | Transylvanian Naked Neck. |
| Houdan.             | Voldarno.                 |
| Lakenfelder.        |                           |

### TABLE, OR MEAT RACES OF FOWLS.

The breeds which excel in flesh qualities are usually medium or large in size of body. The softer and finer the flesh muscle, the less active are they in habit. In several breeds the birds are fairly quick in growth, though not so rapid as the non-sitters, which are preferable for that reason as milk chickens. The majority of this class are good sitters and mothers, the exceptions being among the French races. Nearly all save the Game, Cornish Game, Malay, Aseel and Jersey Black Giant, lay white-shelled eggs.

|                 |         |
|-----------------|---------|
| Antwerp Brahma. | Breda.  |
| Aseel.          | Bresse. |
| Black Sumatra.  | Bruges. |

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|                           |                     |
|---------------------------|---------------------|
| Causaade.                 | Jersey Black Giant. |
| Courtes Pattes.           | La Fleche.          |
| Crèveœur.                 | Malay.              |
| Dorking.                  | Mantes.             |
| Du Mans.                  | Orloff.             |
| Estaires.                 | Padovana.           |
| Game.                     | Paradise.           |
| Indian (or Cornish) Game. | Sussex.             |

### GENERAL, OR DUAL PURPOSE RACES OF FOWLS.

By these terms are designated those races in which the productive qualities are equally balanced without excessive development either for eggs or flesh. Generally speaking the fowls are large in size of body. They are usually heavy in bone, and consequently somewhat slow in growth. What they lose in egg-production, as compared with the non-sitters, is gained in meat properties. Almost without exception they are excellent sitters and mothers, and lay brown or tinted-shelled eggs, usually good as winter layers.

|                 |                     |
|-----------------|---------------------|
| Ardenne.        | Java.               |
| Barbezieux.     | Langshan.           |
| Barnevelder.    | Malines.            |
| Bourbourg.      | Marsh Daisy.        |
| Brabant.        | Orpington.          |
| Brahma.         | Owl-bearded Dutch.  |
| Chantecler.     | Plymouth Rock.      |
| Cochin.         | Polverara.          |
| Dominique.      | Prat.               |
| Drente.         | Rhode Island Red.   |
| Faverolles.     | Rhode Island White. |
| Flemish Cuckoo. | Scotch Dumpie.      |
| French Cuckoo.  | Scotch Grey.        |
| German Creeper. | Wyandotte.          |
| Huttegem.       |                     |

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### EXHIBITION FOWLS.

Nearly all of the breeds named in the preceding tables are bred for exhibition. In some by development of abnormal characters, notably in the Brahma, Cochin, Modern Game, Modern Langshan and Spanish, the doing so has destroyed the practical values. In others where the same process has taken place in order to preserve the productive qualities there are two distinct types, one for exhibition and the other for production. The following breeds are bred almost entirely for exhibition or ornamental purposes.

|                  |          |
|------------------|----------|
| Game Bantams.    | Silkies. |
| Variety Bantams. | Sultans. |

### CHARACTERISTICS.

The following tables indicate in a convenient form some of the characteristics and qualities of the different races of domestic fowls :

#### BREEDS LAYING BROWN OR TINTED-SHELLED EGGS.

|                        |                     |
|------------------------|---------------------|
| Antwerp Brahma.        | Java.               |
| Aseel.                 | Jersey Black Giant. |
| Barnevelder.           | Langshan.           |
| Bourbourg.             | Malay.              |
| Brahma.                | Malines.            |
| Bruges (very light).   | Marsh Daisy.        |
| Chantecler.            | Orloff.             |
| Cochin.                | Orpington.          |
| Dominique.             | Plymouth Rock.      |
| Estaires.              | Polish Greenfoot.   |
| Faverolles.            | Rhode Island Red.   |
| Flemish Cuckoo.        | Rhode Island White. |
| Game, English.         | Sussex.             |
| Huttegem.              | Wyandotte.          |
| Indian (Cornish) Game. |                     |



## COLOUR OF FLESH AND SKIN.

*White.*

|                        |                                   |
|------------------------|-----------------------------------|
| Antwerp Brahma.        | Huttegem.                         |
| Ardenne.               | La Fleche.                        |
| Barbezieux.            | Lakenfelder.                      |
| Bearded Thuringian.    | Landhen, Danish.                  |
| Bergische Crower.      | Magyar, White.                    |
| Black Sumatra.         | Marsh Daisy.                      |
| Brabant.               | Minorca, White.                   |
| Breda.                 | Moeven.                           |
| Bresse.                | Orpington, Buff, White, Spangled. |
| Caumont.               | Owl-bearded Dutch.                |
| Caussade.              | Padovana.                         |
| Courtes Pattes.        | Paradise.                         |
| Crested Dutch.         | Polish Greenfoot.                 |
| Crèveccœur.            | Polverara.                        |
| Dorking.               | Prat.                             |
| Du Mans.               | Ramelsloh.                        |
| Estaires.              | Russian Dutch.                    |
| Faverolles.            | Schlotterkamm.                    |
| Flemish Cuckoo.        | Scotch Dumpie.                    |
| French Cuckoo.         | Scotch Grey.                      |
| Game (some varieties). | Sicilian Buttercup.               |
| German Creeper.        | Sultan.                           |
| Herve.                 | Sussex.                           |
| Houdan.                |                                   |

*Yellow or Cream.*

|              |                        |
|--------------|------------------------|
| Ancona.      | Coveney White.         |
| Barnevelder. | Dominique.             |
| Bourbourg.   | Exchequer Leghorn.     |
| Brahma.      | Game (some varieties). |
| Chantecler.  | Indian (Cornish) Game  |
| Cochin.      | Java.                  |

|                        |                     |
|------------------------|---------------------|
| Jersey Black Giant.    | Pavloff.            |
| Leghorn.               | Plymouth Rock.      |
| Magyar (except White). | Rhode Island Red.   |
| Malay.                 | Rhode Island White. |
| Malines.               | Voldarno (White).   |
| Orloff.                | Wyandotte.          |

*Grey or Greyish-White.*

|             |                           |
|-------------|---------------------------|
| Andalusian. | Mantes.                   |
| Braekel.    | Minorca, Black.           |
| Bruges.     | Orpington, Black.         |
| Campine.    | Old English Pheasant.     |
| Castillian. | Polish.                   |
| Drente.     | Redcap.                   |
| Friesland.  | Spanish, Black.           |
| Hamburgh.   | Transylvanian Naked Neck. |
| Langshan.   | Voldarno, Black.          |

COLOUR OF LEGS AND FEET.

*White.*

|                        |                                   |
|------------------------|-----------------------------------|
| Antwerp Brahma.        | Minorca, White.                   |
| Dorking.               | Orpington, Buff, White, Spangled. |
| Faverolles.            | Prat (or light Slate).            |
| Game (some varieties). | Russian Dutch.                    |
| Herve, Cuckoo.         | Scotch Dumpie.                    |
| Huttegem.              | Scotch Grey (Mottled White).      |
| Magyar, White.         | Sussex.                           |

*Pinky-white.*

|                  |                   |
|------------------|-------------------|
| Bourbourg.       | Houdan (Mottled). |
| Crèveœur, White. | Paradise.         |
| Flemish Cuckoo.  | Malines.          |
| French Cuckoo.   |                   |

*Dark or Slate-blue.*

|                        |                           |
|------------------------|---------------------------|
| Andalusian.            | Herve, Black, Blue.       |
| Ardenne.               | Java.                     |
| Barbezieux.            | Jersey Black Giant.       |
| Bearded Thuringian.    | La Fleche.                |
| Bergische Crower.      | Lakenfelder.              |
| Black Sumatra.         | Landhen, Danish.          |
| Brabant.               | Langshan.                 |
| Braekel.               | Mantes.                   |
| Breda.                 | Marsh Daisy.              |
| Bresse.                | Old English Pheasant.     |
| Bruges.                | Moeven.                   |
| Campine.               | Orpington, Black.         |
| Castillian.            | Pavloff.                  |
| Caumont.               | Polish.                   |
| Caussade.              | Polish Greenfoot.         |
| Caux.                  | Polverara.                |
| Courtes Pattes.        | Prat (or White).          |
| Crested Dutch.         | Ramelsloh.                |
| Crèveœur, Black.       | Redcap.                   |
| Drente.                | Schlotterkamm.            |
| Du Mans.               | Sicilian Buttercup.       |
| Estaires.              | Silkie.                   |
| Friesland.             | Spanish, Black.           |
| Game (some varieties). | Sultan.                   |
| German Creeper.        | Transylvanian Naked Neck. |
| Hamburgh.              | Voldarno, Black.          |

*Yellow.*

|              |                        |
|--------------|------------------------|
| Ancona.      | Coveney White.         |
| Aseel.       | Dominique.             |
| Barnevelder. | Exchequer Leghorn.     |
| Brahma.      | Game (some varieties). |
| Chantecler.  | Indian (Cornish) Game. |
| Cochin.      | Leghorn.               |



|                   |                     |
|-------------------|---------------------|
| Magyar.           | Rhode Island White. |
| Orloff.           | Voldarno, White.    |
| Padovana.         | Wyandotte.          |
| Plymouth Rock.    | Malay.              |
| Rhode Island Red. |                     |

## SHAPE OF COMB.

*Single.*

|                         |                           |
|-------------------------|---------------------------|
| Ancona.                 | Herve.                    |
| Andalusian.             | Huttegem.                 |
| Antwerp Brahma.         | Java.                     |
| Ardenne.                | Jersey Black Giant.       |
| Barnevelder.            | Lakenfelder.              |
| Barbezieux.             | Landhen, Danish.          |
| Bearded Thuringian.     | Langshan.                 |
| Bergische Crower.       | Leghorn.                  |
| Bourbourg.              | Magyar.                   |
| Brabant.                | Malines.                  |
| Braekel.                | Mantes.                   |
| Bresse.                 | Minorca.                  |
| Campine.                | Moeven.                   |
| Castilian.              | Orpington.                |
| Caussade.               | Paradise.                 |
| Caux.                   | Plymouth Rock.            |
| Cochin.                 | Polish Greenfoot.         |
| Courtes Pattes.         | Prat.                     |
| Dorking (except White). | Ramelsloh.                |
| Drente.                 | Rhode Island Red.         |
| Estaires.               | Schlotterkamm.            |
| Exchequer Leghorn.      | Scotch Dumpie.            |
| Faverolles.             | Scotch Grey.              |
| Flemish Cuckoo.         | Spanish, Black.           |
| French Cuckoo.          | Sussex.                   |
| Friesland.              | Transylvanian Naked Neck. |
| Game.                   | Voldarno.                 |
| German Creeper.         |                           |

*Rose.*

|                 |                       |
|-----------------|-----------------------|
| Chantecler.     | Old English Pheasant. |
| Dominique.      | Redcap.               |
| Dorking, White. | Rhode Island Red.     |
| Du Mans.        | Rhode Island White.   |
| Hamburgh.       | Russian Dutch.        |
| Marsh Daisy.    | Wyandotte.            |

*Pea or Triple.*

|                |                        |
|----------------|------------------------|
| Aseel.         | Buckeye.               |
| Black Sumatra. | Indian (Cornish) Game. |
| Brahma.        | Orloff.                |
| Bruges.        | Padovana.              |

*Horned.*

|                    |            |
|--------------------|------------|
| Crested Dutch.     | Pavloff.   |
| Crèveœur.          | Polish.    |
| La Fleche.         | Polverara. |
| Owl-bearded Dutch. |            |

*Cup or Leaf.*

|                |                      |
|----------------|----------------------|
| Coveney White. | Sicilian Buttercup.  |
| Houdan.        | Sicilian Flowerbird. |

## CLASSIFICATION OF RACES OF DUCKS.

## LAYING BREEDS.

|                |                 |
|----------------|-----------------|
| Orpington.     | Khaki Campbell. |
| Indian Runner. | Pekin.          |

## MEAT BREEDS.

|                |           |
|----------------|-----------|
| Aylesbury.     | Huttegem. |
| Blue Swedish.  | Merchtem. |
| Blue Termonde. | Muscovy.  |
| Cayuga.        | Rouen.    |
| Duclair-Rouen. |           |

CHARACTERISTICS.

COLOUR OF FLESH AND SKIN.

*White.*

|                |                |
|----------------|----------------|
| Aylesbury.     | Duclair-Rouen. |
| Blue Swedish.  | Huttegem.      |
| Blue Termonde. | Merchtem.      |
| Cayuga.        |                |

*Yellow or Cream.*

|                 |            |
|-----------------|------------|
| Indian Runner.  | Orpington. |
| Khaki Campbell. | Pekin.     |
| Muscovy.        | Rouen.     |

COLOUR OF LEGS AND FEET.

*Orange or Yellow.*

|                 |            |
|-----------------|------------|
| Aylesbury.      | Muscovy.   |
| Blue Swedish.   | Orpington. |
| Indian Runner.  | Pekin.     |
| Khaki Campbell. | Rouen.     |
| Merchtem.       |            |

*Dark.*

|                |                |
|----------------|----------------|
| Blue Termonde. | Duclair-Rouen. |
| Cayuga.        | Huttegem.      |

COLOUR OF BILLS.

*Blue or Grey.*

|                |                 |
|----------------|-----------------|
| Blue Swedish.  | Indian Runner.  |
| Blue Termonde. | Khaki Campbell. |
| Cayuga.        | Rouen.          |
| Duclair-Rouen. | Russian.        |
| Huttegem.      |                 |



*Flesh-coloured.*

|            |           |
|------------|-----------|
| Aylesbury. | Merchtem. |
|------------|-----------|

*Orange-coloured.*

|            |        |
|------------|--------|
| Muscovy.   | Pekin. |
| Orpington. |        |

CLASSIFICATION OF RACES OF GEESE.

LAYING BREED.

Roman.

MEAT BREEDS.

|           |             |
|-----------|-------------|
| African.  | Embden.     |
| Canadian. | Russian.    |
| Chinese.  | Saddleback. |
| Danubian. | Toulouse.   |

CHARACTERISTICS.

COLOUR OF FLESH AND SKIN.

*Yellow or Orange.*

|          |                    |
|----------|--------------------|
| African. | Saddleback (pale). |
| Chinese. | Toulouse.          |
| Russian. |                    |

*Creamy-White.*

|           |         |
|-----------|---------|
| Canadian. | Embden. |
| Danubian. | Roman.  |

*Dark Grey.*

Egyptian.

COLOUR OF LEGS AND FEET.

*Orange.*

|                        |                       |
|------------------------|-----------------------|
| African.               | Embden.               |
| Chinese Brown (dusky). | Russian.              |
| Chinese White.         | Saddleback (reddish). |
| Egyptian (pink).       | Toulouse.             |

*Grey.*

Roman.

*Red.*

Danubian.

*Black.*

Canadian.

COLOUR OF BILLS.

*Orange.*

|                  |                       |
|------------------|-----------------------|
| Chinese (dusky). | Russian.              |
| Embden.          | Saddleback (reddish). |
| Roman (reddish). | Toulouse.             |

*Red.*

Danubian.

*Black or Purple.*

|           |          |           |
|-----------|----------|-----------|
| Canadian. | African. | Egyptian. |
|-----------|----------|-----------|

CLASSIFICATION OF RACES OF TURKEYS.

All races of turkeys are bred for meat qualities.

CHARACTERISTICS.

COLOUR OF FLESH AND SKIN.

*White.*

|                   |               |
|-------------------|---------------|
| American Bronze.  | Fawn.         |
| Black.            | Narragansett. |
| Cambridge Bronze. | Ronquière.    |

*Reddish-White.*

White.

COLOUR OF LEGS AND FEET.

*White.*

|                |             |                  |
|----------------|-------------|------------------|
| Fawn (bluish). | Ronquières. | White (pinkish). |
|----------------|-------------|------------------|

*Grey.*

Cambridge Bronze.

*Black or Slate.*

|                  |        |
|------------------|--------|
| American Bronze. | Black. |
|------------------|--------|

*Salmon or Brown.*

Narragansett.

COLOUR OF BEAKS.

*Flesh.*

|                   |             |        |
|-------------------|-------------|--------|
| Cambridge Bronze. | Ronquières. | White. |
|-------------------|-------------|--------|

*Horn.*

|                  |        |               |
|------------------|--------|---------------|
| American Bronze. | Black. | Narragansett. |
|------------------|--------|---------------|

*Bluish-white.*

Fawn.

HEADS AND TAILS OF FOWLS.

The variations in the combs and tails of fowls are considerable, as will be seen by the accompanying illustrations, for which we are indebted to the courtesy of *The Poultry World* (London). As will be evident, the forms, more especially of combs, are different in size and other detail even though similar, as indicated by the references.

HEADS.\*

1. Rose Comb, in which the leader or spike behind follows the line of neck. As is usual in all combs of this nature there is a considerable number of what are called points, that is, more or less regular growths.

\* Plate LXVII.



2. Triple or Pea Comb, giving the appearance of three distinct fleshy ridges side by side, the centre being the highest.
3. Rose Comb, in which the leader is carried straight behind and above the line of neck.
4. Walnut Comb, resembling a half walnut on top of the skull.
5. Red Cap Comb, very large and heavy, often coarse, and with a very small leader.
6. Mulberry Comb, carried in front, deep purple in colour.
7. Small Single Comb, as found on heavy-bodied breeds (See 13).
8. Large Single Comb, found on light-bodied breeds, usually following the line of neck behind, and falling over to one side in hens. (See 14.) In Single combed fowls there is a tendency to growths known as side sprigs, which are objectionable.
9. Buttercup Comb, forming a complete cup without any growth in the centre.
10. Small Rose Comb, fine in points, and with straight leader.
11. Strawberry or Butterfly Comb with protuberance in the centre.
12. Horned Comb, with sharp spikes rising from head.
13. Small Single Comb on hens of heavy breeds.
14. Large Single Comb on hens of light breeds which are heavy layers.
15. Single Comb slightly carried on one side.

TAILS.\*

The tails of males generally have sickle feathers which are absent in hens. The former are carried at different angles as indicated in the illustration, which, in each case, shows the tail of the male above, and that of the female below.

SUMMARY.

(a) That domestication has been the prime factor in evolution of distinctive breeds and varieties.

(b) That variation of environment, use and disuse of parts of body and of organs, differences in nature of food, and altered habits of life, have emphasised inherent tendencies to variation.

\* Plate LXVIII.

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(c) That changes of conditions are stimulative in respect to increased productivity, and these largely avoid deterioration which follows continuous breeding of poultry within limited areas.

(d) That breeds are influenced by climate, soil and altitude, and should conform to their conditions.

(e) That artificial selection should be in unison with that which is natural.

(f) That increased size of body, greater fecundity, and decrease in maternal instincts, which have resulted from domestication, are more or less temporary, and can only be maintained by selection of breeding stock.

(g) That loss of vigour under modern conditions is a factor of essential importance.

(h) That the exhibition system has led to a greatly increased number of breeds and varieties of poultry, whereas commercial production tends to limitation in that direction.

(i) That careful study should be given to classification relative to productive qualities.

### REFERENCES.

- (1) Variation of Plants and Animals under Domestication, by Charles Darwin, F.R.S. (London, 1885.)
- (2) Agricultural Geology, by Primrose McConnell (London, 1902).
- (3) The Ascent of Man, by Henry Drummond (London, 1894).
- (4) Report of Poultry Conference (Dublin, 1911).

CHAPTER XIV  
LAWS OF BREEDING AND THEIR  
APPLICATION.





## CHAPTER XIV

### LAWS OF BREEDING AND THEIR APPLICATION.

Philosophers from the time of Aristotle, and possibly at an earlier date, have given attention to the problems involved in breeding. Within later periods of the world's history scientists have devoted themselves, as is still the case, to study and research in this field, in which direction considerable progress has been made though that may only be a beginning. Many theories have been advanced, some of which have justified themselves, whilst others have had to be abandoned in the light of greater knowledge and practical tests. There is always a tendency to minimise the importance of those who are regarded as theorists. They are frequently the heralds of progress. That, as stated by the late Professor Henry Drummond (1), is erroneous: 'Without some hypothesis no work can ever be done, and, as everyone knows, many of the greatest contributions to human knowledge have been made by the use of theories either seriously imperfect or demonstrably false. This is the age of the evolution of Evolution. All thoughts that the evolutionist works with, all theories and generalizations, have been themselves evolved and are now being evolved. Even his theory perfected, its first lesson would be that it was itself but a phase of the evolution of further opinion, no more fixed than a species, no more final than the theory which it displaced. Of all men the evolutionist, by the very nature of his calling, the mere tools of his craft, his understanding of his hourly shifting place in the always moving and ever more mysterious world, must be humble, tolerant, and undogmatic.' It is by such spirit that advance has been made, and that the pages in the great book of Nature are being opened and some, at least, of its mysteries revealed. The process is slow. There are some questions, one of which is the Secret of Life, that have as yet proved unfathomable.

## SPECIES AND BREEDS.

The term 'species' is applied to those distinct forms of animals and birds which are distinct from, and do not interbreed with, each other beyond the first generation. They may produce hybrids, stopping at that point. These distinctive forms or races are termed 'breeds.' The tendency in nature is to form groups. The four species of poultry may be said to form one group. They do not, however, breed together, the reason for which is unknown. There is great affinity in primary characters, and to a lesser degree in secondary. The same is seen with other species. The horse, the ass, and the zebra are very similar in shape, form, and habits, yet they do not interbreed in the hybrid stage. Horses bred under the most diverse conditions in any part of the world, fed on absolutely different foods, and developed upon extreme lines, will freely mate, and their progeny be fertile. The differences in appearance between a large duck and a small goose are less than between the Rouen and Indian Runner ducks. Whilst the latter freely cross, the former do not. Such limitations must be recognised.

## VARIETIES.

There is a constant tendency to variation in all poultry, increasingly so when domesticated. At the same time like produces like generally speaking, and is the sheet anchor of the breeder. Otherwise he would never know what would be the result of his efforts. If he mates Leghorns, he obtains Leghorns; by mating Plymouth Rocks progeny of that type is produced, and so on. There are variations in minor directions, often capable of fixation and perpetuation. These are found both in characteristics and in productivity. In the former there are seen differences in coloration of plumage, upon which is founded the development of new varieties. On the latter has been based the increased fecundity upon which so much of Commercial Poultry Husbandry has been founded. Thus there are limitations to fixity of race and varieties. As already indicated, the evolution of breeds and varieties, inclusive of changes in size of body and productivity, are largely the result of changes in environment. Charles



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Darwin stated (2) : ' Man has no power of altering the absolute conditions of life ; he cannot change the climate of any country ; he adds no new element to the soil ; but he can remove an animal or plant from one climate to another, and give it food which it did not subsist on in the natural state. . . . He unintentionally exposes his animals and plants to various conditions of life, and variability supervenes, which he cannot even prevent or check.' Often, however, he has designedly succeeded in producing new varieties. The tendency to some extent is weakened where the fowls or other poultry are bred under the same conditions for generations, as is also the fact that fixity of type and of colour is greater in accordance with the length of time during which breeding has been on the same lines. That explains the persistency of certain types. Among exhibition poultry this has often been carried to an extreme, and is now met with in production poultry. With all pure races there is a tendency to work out, to exhaust their vigour, emphasised by more rigid and uniform conditions.

### ATAVISM AND REVERSION.

The difference indicated by these terms is thus explained by Professor E. Davenport : (3) ' It is important that the student observe the modern distinction between " Reversion " and " Atavism." They both refer to the re-appearance of characters once typical but now extinct. " Reversion " is the term to use when the character belonged to a nearby ancestor clearly of the same species but several generations removed, whilst " atavism " is used to denote the appearance of characters belonging to exceedingly remote ancestors, perhaps even of different species. . . . The term " reversion " covers most of the breeder's needs. It is the biologist who deals with remote species.'

Every breeder is met with evidencies of this influence which often upsets his calculations. The inheritance not only of external characters, but also of qualities, such as temperament, productivity, flesh formation, and maternal instinct, are subject to such influence. Usually the longer any race is bred upon definite lines the greater is the certitude. Even with the purest of stock in so far as length of descent is concerned, these variations occur. In many breeds

brown feathers frequently appear, even in black and white self-coloured varieties. The explanation appears to be that this is a pull-back to the original and parent stock. The growth of such feathers is no proof of impurity of race. Crosses induce such changes, due to the fact that the fresh blood introduced gives strength to dormant influences, which resume their power. Darwin refers to this question as follows : (2) 'When two distinct races are crossed, it is notorious that the tendency in the offspring to reversion to one or both parent forms is strong and endures for many generations.' And again : 'With crossed breeds the act of crossing in itself certainly leads to the recurrence of long lost characters, as well as of those derived from either parent form. That a being should be born resembling in certain characters an ancestor removed by two or three, and in some cases by hundreds or even thousands of generations, is assuredly a wonderful fact.'

The system which is general wherever the breeding of poultry is conducted on definite lines is to maintain pure races and carefully preserving these as necessary to fix the characters and qualities. Latent or dormant influences, however, handed down from ancestors now and again exert their power. With reference to fixity of character Darwin says : (2) 'It is a general belief amongst breeders that the longer any character has been transmitted in any breed, the more fully it will continue to be transmitted. I do not wish to dispute the truth of the proposition that inheritance gains strength simply through long continuance, but I doubt whether it can be proved. In one sense the proposition is little better than a truism ; if any character has remained constant during many generations, it will be likely to continue so if the conditions of life remain the same. So, again, in improving a breed, if care be taken for a length of time to exclude all inferior individuals the breed will obviously tend to become pure, as it will not have been crossed during many generations by an inferior animal.'

In this connection is a point of great importance, namely, whether those birds which indicate reversion may not be valuable because of increased vigour ? In many cases, without any intercrossing, change of conditions leads to variations. If we remove animals or birds from one part of the earth to another, even though these are bred most



carefully, the tendency to reversion is emphasised. It is also true that, in many instances, vigour is considerably enhanced. The usual custom, however, is to eliminate as quickly as possible all those specimens called 'wastrels' or 'culls.' Probably these rejected birds, if used in a judicious manner, would help in the maintenance of constitutional vigour, the loss of which both in exhibition and productive stock has been evident in many directions. Breeders generally regard reversion with aversion. It is submitted that this view demands reconsideration. As Dryden says : (4) 'Reversion is usually an evil, not always. Where improvement has been going steadily on, reversion must always be an evil. Sometimes, however, progress has gone backward in breeding, and in that case reversion may restore the lost character.' Atavism and reversion are factors to be reckoned with. There is no mathematical certitude of parental values in breeding.

#### PARENTAL INFLUENCE.

In polygamous species the influence of the male parent must always be greater than that of any individual female, so far as the flock is concerned. If a cock is mated with ten hens, and from each of the latter a score of chickens are produced, every female will, generally speaking, have a half-share in twenty of these birds and no more, whereas the male is responsible for half of the two hundred youngsters. Hence the greater relative importance of the male. One bad hen in a flock will involve loss to the extent of her own chickens and no more. Should her mate be inferior in any direction, all will be affected. Thus has arisen the opinion that the male is everything, and that the quality of the hens so long as he was right is of lesser moment. With the introduction of the trap nest for layers, the pendulum swung in the opposite direction, and was carried in practice to an extreme. As indicated in Chapter XVIII, in so far as selection is applied to egg-production, experience has shown that the male has the more important influence.

Leaving out physical defects, there are general guiding principles which may be accepted, namely :

That the male primarily influences the external characters, such as build, type, plumage, and action.



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That the female primarily influences size of body, colour of skin and legs, constitution, temperament, productivity, and habits.

It must not be thought, however, that the opposite sex has no part to play in each direction, for there is abundant evidence that such is not the case.

### COLORATION OF PLUMAGE.

Selective breeding is responsible for the greater variations found in distinctive feather colour and markings of poultry, based, however, upon changes in that respect which appear to be entirely natural and in some cases spontaneous. Under wild conditions these variations are largely protective. The more homely hue of the female makes her less easily seen by enemies. The brighter plumage of her mate, who is the defender of the flock, draws attention of predatory opponents to himself, and he has to fight for her. The colours most pronounced in the original fowls were red and black, to which have been added brown, buff, and blue, the latter of which is not pure. Blue, it is stated by Dr. Jull (5) is produced 'by the black pigment granules being of a peculiar shape and being laid down in such a manner that the colour effect is blue instead of black or black and white.' Green is never found in the domestic fowl or other poultry.

The most popular and widely distributed breeds of fowls, ducks and geese are pure white. There has, however, been a generally accepted opinion that white-haired animals and white-plumaged birds are less vigorous than those with coloured hair or feathers. The late Charles Darwin gave expression to that opinion which was generally accepted. It did not, however, accord with experience. Further, animals and birds met with in the Arctic Zone are either pure white or very pale in colour, even though the conditions of life are much more severe than in the Temperate or Torrid Zones, possibly due to the law of survival of the fittest. The fact remains that these are vigorous in the extreme.

Dr. Alfred Richard Wallace, the great coadjutor with Darwin, repeated these statements (6), on reading which we communicated with him, placing before him the facts as stated above with regard to the Arctic Zone, and also that the experience of breeders of poultry was that several of the white-plumaged fowls and other poultry are

among the hardiest we have. In reply he said that he had made no personal observations on the subject, and had accepted the view held by Darwin, adding, however, that in view of what we had submitted it was evident the question involved demanded reconsideration.

From the fact that white-plumaged races of poultry have proved to be as hardy and productive as any of the coloured breeds and varieties, and that there are manifest advantages accruing from the selection of self-coloured races, more especially those maintained for productive qualities, the opinion of Darwin required further consideration, especially as there are undoubtedly white-plumaged birds which are delicate and of small value. M. Louis Vander Snickt, at the Reading Conference, 1899, stated that, 'There exists in animals two whites—a weak white, due to albinism (absence of pigmentation) and a strong white on dark ground, the strongest of all colours, resulting from the union of all other colours.' Dr. Jull (5) says: 'White never exists as a pigment in feathers, and the lack of colour appears to be due to innumerable air spaces in the substance of the feathers by which the rays of light are reflected and deflected until all colour is lost.'

Where there is the combination of colour in the white this has generally a very slight blue tinge, or in some instances a creamy appearance, especially in the sunshine. On the other hand with an absence of pigment the animal or bird has a washed-out appearance. The latter are often albinos, the former are not. The great majority of white-plumaged poultry are as hardy as are others.

## HABIT AND INSTINCT.

A common error is to include in the term 'instinct' all actions which are apparently due to natural volition. Artificial rearing has helped to a clearer definition between habit and instinct. Mr. Lloyd Morgan thus described the two functions: (7) 'Instincts are congenital, adaptive and co-ordinated activities of relative complexity, and involving the behaviour of the organism as a whole. They are not characteristic of individuals as such, but are similarly performed by all like members of the same more or less restricted group, under circumstances which are either of frequent recurrence or are vitally essential to the continuance of the race. While they are, broadly speaking,



constant in character, they are subject to variation analogous to that found in organic structures.' Also, 'A habit is a more or less definite mode of procedure or kind of behaviour which has been acquired by the individual, and has become, so to speak, stereotyped through repetition.'

Walking, scratching, pecking, eating, drinking, crouching when frightened, and the crowing of cockerels, are instinctive to the young, and also the sexual and maternal functions when older.

Habits belong to the individual, and are not transmitted to the offspring, except by example. Instincts pass from parents to progeny. Mr. Lloyd Morgan mentions that (7) 'ducklings a day or two old, dropped into a tepid bath, kicked vigorously and excitedly for a few seconds, but in a minute were swimming with easy, rapid motion, and pecking at the marks on the sides of the bath.' Action is stimulated by example, for the same author records that 'In broods of chickens brought up under experimental conditions by themselves, and without opportunities of imitating older birds, are one, or two, or three more active, vigorous, intelligent, and mischievous birds. They are the leaders of the brood; the others are their imitators. Their presence raises the general level of intelligent activity. Remove them, and the others show a less active, less inquisitive, less adventurous life, if one may so put it; they seem to lack initiative.' Among habits may be named the avoidance of water in quantity by chickens and young turkeys, the rejection of certain classes of food, perching, returning to their own dwelling even from a considerable distance, and seeking shelter.

### SEX.

Under natural conditions the rule of life appears to be that the sexes are very nearly equal, though that is not absolutely the case. Males in the wild state are more exposed to danger than the females, and the mortality is usually greater. Under domestication this rule, if it may be so termed, is modified to a considerable degree, though probably not to the extent generally supposed. Even where domesticated the males run greater risks than do the females. To preserve, therefore, an absolute equality of the sexes, it would be necessary



that more males should be bred. So far as dairy cattle are concerned the cow is the producer. With poultry bred for exhibition the requirements as to sex are fairly equal; in production for meat more males are desired; with eggs as the chief object, and especially under specialist conditions, the females are vastly in excess of the opposite sex, in some cases as much as fifty to one. Hence it is that there has been within recent times a constant striving to discover the factors which determine sex, with the object of its control. Such, however, is not new. In remote periods, that is, for at least two thousand years, theories have been promulgated. Some have appeared to warrant a measure of credence. Up to the present time no one of these has justified general adoption. The determination of sex remains one of nature's mysteries. Apart from its control, of which nothing is known, attempts to foretell sex, some of which are merely mechanical, have failed in general practice.

### PEDIGREE BREEDING.

What is known as Pedigree Breeding has been practiced for ages in connection with larger stock. It is the foundation of the present races of domesticated animals. With respect to poultry it was employed by the Cock-fighters in many countries, probably more completely than records indicate. It has been the sheet anchor of the breeder for exhibition, though complicated by the fads and fashions which seem to be inseparable from competition in this field, and which arbitrarily and without the least justification upset the work of years of selective breeding. The object has been to improve the breed or variety as a whole, not merely a few individuals, and in many instances to fix new varieties which have appeared and which promise different, maybe better, forms. With the advent of what is termed Commercial Poultry Husbandry, in which success is achieved by the extent to which fecundity, that is, the production of eggs, can be increased, and of those who realised that whilst such progress must be built upon individuals, profitable accomplishment is determined by the extent to which these transmit their specific quality to future generations. A new field was thus opened to selective breeding, one which is

of unlimited extent. Much has already been achieved. More, however, remains to be done. It is a work which requires a patience and skill which few possess, one which necessarily must be slow, in which there are many disappointments and pitfalls, and the results can only be attained after a series of years. As an indication of the complexity of the process may be given the following by Professor Davenport (3) :

‘The individual inherits from no less than 2046 individuals within ten generations of ancestry, and that, on the average, characters possessed by a single individual of the tenth generation back have an influence to not over one ten thousandth of one per cent of the total heritage, representing a probability of about one in a million—certain to be heard from but of little consequence as a foundation.

‘We must remember that besides the “Foundation” there are 1023 other ancestors of the tenth generation, and some 1022 intervening ancestors, each more powerful by far than the so-called foundation. Six generations back the influence is but 1.5 per cent for the sixty-four individuals involved, or about one-fortieth of one per cent for each. This is an amount of influence which for practical purposes may be considered as a negligible quantity, and it is for this reason that in many lines the dictum has gone out, “The sixth cross is pure,” this meaning that nearly 99 per cent is covered by the “top.”

‘The so-called foundation is therefore not a foundation, but only a beginning, and it is the top, and not the bottom that gives character to the pedigree.’

Pedigree breeding is, therefore, selection continuously on definite lines throughout a series of years, sufficiently long to prove that the characters or qualities sought for are more or less fixed in the race or strain, and that these will be transmitted to stock bred from them. It does not mean absolute certitude or uniformity in any direction. For example, the records of a pen in one of the English Laying Trials, owned by one of the best known pedigree breeders, in which the average of the lot was 213.9 in forty-eight weeks, varied from 64 to 272 eggs, of which six laid more and four less than 200 eggs. The use of the term Pedigree Breeder is greatly abused. It cannot truthfully be applied to those who merely mate birds for two or three seasons, whether their own or purchased stock, or who do not possess over a series of generations records that are absolutely reliable. As pointed out by



Professor Davenport (3) 'pedigree records furnish little information outside of blood lines, and they are totally silent as to what the individuals were actually in their own personalities. This information the breeder needs and must have if he is to succeed.'

In practical experience pedigree breeding is very complex. Unless a wide range of factors enters into consideration there will not be attained complete success. At one time exhibition breeders devoted themselves to external characteristics, plus constitutional vigour, and ignored productive qualities in respect to egg-production, in some cases repressing fecundity, and in others retarding development. That is not now the case to the same degree. In modern times, and since the development of Commercial Poultry Husbandry as now known, the tendency has been to merely regard number of eggs as everything, as a result of which racial characters have been disregarded to a serious extent, as have constitutional vigour, size of body and of egg, fertility and rearibility of egg and chicken. Pedigree breeding involves the most rigid selection, keeping in view all the factors, careful records of each individual used for breeding stock, both as regards appearance, development, rate of growth, productivity, and influence upon the progeny. Birds which pass these tests have cost much to produce. They possess a high value which must be paid for. That fact is now recognised, so much so that prices are often paid in excess of what were exceptional in former days for the most perfect exhibition specimens. In no branch of Poultry Husbandry has the advance been so great as in that of Pedigree Breeding, dependent as that is upon the skill and the honour of those engaging in it.

Professor G. O. Hall summarises the work thus (8) :

'Breeding records should answer at least four questions regarding any individual bird which has been used in the breeding pen. These questions are :

'(1) What birds are its ancestors, and what has been their breeding and productive performance ?

'(2) What birds are its brothers and sisters, and, if the information is available, what has been their breeding and productive performance ?

'(3) With what individual, or individuals, is it at present mated, or has it been mated in the past ?

'(4) What were the results of these matings ?



‘ There are four essentials in the yearly cycle of keeping a complete flock-breeding record which will furnish the information just listed on any individual bird. These essentials are :

- ‘ (1) Pedigree hatching.
- ‘ (2) The recording of each individual mating.
- ‘ (3) The making of a record of each breeding female’s pedigree, production and progeny, and
- ‘ (4) The making of a record of each male’s pedigree and progeny.’

### INBREEDING.

In the case of wild animals and birds there is a considerable inbreeding. What is less harmful in the wild state, owing to elimination of the weaker members of the herd or flock, to the natural conditions under which the creatures exist, the constant search for food, often over a wide area, and the change of environment, becomes very serious under domestication, where we limit those influences which help to preserve the stamina and vigour of the stock. What was stated by Darwin has never been controverted (3) when sufficient time has elapsed to permit the effects to manifest themselves :

‘ Long-continued, close interbreeding between the nearest relations diminishes the constitutional vigour, size, and fertility of the offspring, and occasionally leads to malformations, but not necessarily to general deterioration of form and structure. This failure of fertility shows that the evil results of interbreeding are independent of the augmentation of morbid tendencies common to both parents, though this augmentation no doubt is often highly injurious. Our belief that evil follows from close breeding rests to a certain extent on the experience of practical breeders, especially of those who have reared many animals of quickly-propagating kinds, but it also rests on several carefully-recorded experiments. With some animals close interbreeding may be carried on for a long period with impunity by the selection of the most vigorous and healthy individuals, but sooner or later evil follows. The evil, however, comes on so slowly and gradually that it easily escapes observation, but can be recognised by the almost instantaneous manner in which size, constitutional vigour, and fertility are regained when animals that have long been interbred are crossed with a distinct family.’

Within recent years a strong tendency has been manifest on the part of biologists to adopt interbreeding, largely due to the necessity for this system in working on Mendelian lines. The same is true with many breeders, more especially in America and Great Britain, the full effects of which cannot yet be seen. That inbreeding has had a powerful influence in perfecting breeds is unquestionable. The impulse given relates to bad as well as good characters and qualities, seen in one direction as much as in the other. Where the main object is production of eggs and flesh, the question is entirely different. Capacity in egg-production is often high in weakly stock. That is not adversely affected by inbreeding. Capability, as indicated by natural vigour, activity of habit, a high standard of digestibility, and suitable structure of body, weakens as a result of inbreeding. So far as we are aware, there is no really inbred family which has for long maintained its productivity without introduction of fresh blood. Whilst, in the hands of skilful breeders, who are willing to make drastic selection, and to wait for results, those who can operate upon a larger scale and breed a considerable number of birds, inbreeding may from time to time be adopted. The risks in loss of vigour, in hatchability of eggs, and in embryonic and chick mortality, are so considerable that the producer, whether farmer or poultry-keeper should studiously avoid such system. Even though there may be no immediate evidence of loss, the ultimate effect is what must be considered. Inbreeding tends to enfeeblement as evidenced by the mortality referred to, and weakening of the power of resistance to disease, as evident at the present time in the more intensive branches of Poultry Husbandry. The degree of domestication determines rapidity of influence. What may be of more limited effect when the birds are on range, and the conditions are natural, is completely changed as a result by whatever is artificial. Epidemics and general mortality are but the expression of inability to withstand attacks of enemies none the less potent because they are unseen.

### LINE BREEDING.

This term refers to the use of birds for reproduction which are restricted to individual members within the same line of descent. It was originally introduced with the object of a more speedy attainment of



improvement in exhibition poultry, and to prevent the full effects of breeding which have already been indicated. There is a measure of close relationship, though that is more or less remote. It is a modified form of inbreeding. That line breeding, in the hands of a careful breeder, makes for improvement of external characters and for productive qualities, is undeniable. Many of our best races of poultry, as of other stock, have been so influenced. As an example may be quoted the White Leghorn in Denmark. Imported about 1880, even though subsequent introductions took place, it is evident that the stocks are mainly of the same line of descent. That is also true of the Pekin duck in Britain. There has, however, to be taken into account distribution over a wide area, and the keeping and rearing under different conditions, which, as we have already seen, exert a considerable influence. What is here meant is that, supposing chickens from the same parent stock are scattered widely where the climatic and soil conditions are different, there does not seem to be the same results in reduction of virility and increased enfeeblement, as if they were bred continuously on the same place. Such systematic transference, properly and regularly carried out, and all the time with rigid selection for constitutional vigour, would counteract much of the ill-effects of line breeding. Close and line breeding are both being tested in Europe and America, in some instances under most favourable conditions, in respect to egg-production. The late Douglas Tancred, probably the most successful poultry breeder of his day, practiced line breeding throughout his career. He, however, adopted the most rigid selection in respect to racial characters and constitutional vigour. He was, however, one whose work was the breeding of stock for sale on the basis of its productive quality. What applies in his case is not applicable to those actually engaged in production. His success does not apply to the last named. Professor Davenport shows clearly the disadvantages of line breeding as follows (3): 'The chief danger in line breeding is that the breeder will select by pedigree, abandoning real individual selection. A line-bred pedigree is valuable or dangerous in exact proportion as the individuals have been bred up to grade. . . . The only requirement is not to abandon individual selection. A pedigree is not a crutch on which incompetence can lean, it is a guarantee of blood lines.' Professor James Dryden sums up the effect of close breeding,



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regarding line breeding as merely a form of it (4) : ' It is undoubtedly true that close breeding or inbreeding has been a costly blunder, and it is playing with a dangerous weapon when inbreeding is held up to poultry breeders as always desirable or necessary. It is a problem that can be solved only after long experiment, and it appears to the writer that the data is not at hand upon which to base final judgment. In the meantime a common sense view should be taken by the breeder, which should prompt him to avoid close breeding, and suggest that where it seems necessary to fix or maintain some desirable characteristics, the breeding together of distant relatives may possibly be practiced to advantage.' Further, there is abundant proof that the production breeder can attain a high average of eggs by introduction of fresh blood of the right type without close or line breeding, and thus maintain the vigour of his flocks.

### BREED VERSUS STRAIN.

It is often stated that ' good laying is a question of strain, and not of breed,' which has yet to be proved. A bald statement as quoted reveals but a part, perhaps a small part of the truth. Breed, and strain, and environment, are all intimately associated, as are feeding and general management.

The average in eggs and flesh is fairly even with fowls bred under natural or semi-natural conditions, apart from selection on special lines. When brought under domestication there is a great increase in the number of eggs produced, and in the size of body, of which evidence has been given above. Up to this point, therefore, it would appear that strain is of lesser importance, and the increase named has been due to other than hereditary influences. It is often found that the introduction of a new type or breed, either by importation or combination of existing races, yields remarkable results. Variations there will always be. Nature works with plastic materials. A hundred influences, of which we know nothing, may be responsible for these changes. It is well known that a breeder may sell ten lots of pullets of the same breed, strain, and age, to as many customers, every one of which will vary in production when mature. He may rear a hundred pullets from the same parents, under like conditions, and the variations

in this respect will range very widely ; or he may rear fifty chickens, and not more than half a dozen will be of the same weights at any given age. There must be dependence upon breed in the first place, supplemented by strain, each of the same value. Heavy laying is by no means modern. Records are available of hens which a hundred years ago were as prolific as any met with to-day. In the 'seventies of last century we were interested in an experiment in which a flock of White Leghorn pullets produced an average of 156 eggs in their first laying year, and that within little more than a decade of the breed's introduction into Britain. That was not, and could not be, attributable to strain ; other factors were responsible, the chief of which was breed. It should not be forgotten that high productivity is of limited value unless it can be transmitted. It is the average yield of a flock which gives the profit, not the performances of one or two birds.

In speaking of strain or family, it is well to inquire what is meant by the term. Usually it refers to a few, in some instances very few, generations bred along the same lines. Professor Davenport says (3) : 'The differences that do exist within the same family serve to show the wide divergencies possible with the same hereditary elements, although, in studying adults, some allowances must be made for differences in development due to external causes.' There is a further point which demands attention, namely, that families become exhausted much sooner than do breeds, due to the fact that the former are usually selected much more closely than are the latter, in which case the reserves for maintenance of virility are much less. As in the case of exhibition stock the selection for definite external characters are sometimes antagonistic to productivity, so the extreme or hasty development of economic qualities leads to degeneracy by over-taxing the system. Both of these are abnormal, and have to be paid for in one way or another. Strain has an important part to play, but is only one factor among many.

### MENDELISM.

Theories as to breeding have been put forth from the earliest times, many of which have proved to be untenable. During the present century the study of genetics has received a large amount of attention



from scientists in many countries, resulting in a considerable accession of knowledge, which, when it has been tested in practice, should be of importance to the breeder. To a large degree observations made are on what are known as Mendelian lines. The term given is the result of discoveries by an Austrian monk named Gregor Mendel in the 'sixties of last century. These were not accepted for many years. About 1900 prominence was given to Mendel's theory of breeding, since which time a large amount of study has been given to the subject by eminent investigators in Europe, America and Asia. As yet it has not proved of much value to practical poultry-keepers, and until more is learnt they should wait more definite conclusions than have yet been published. Records of what is being done are given in Professor Punnett's writings (9), in scientific publications, and in reports of research centres. Briefly stated, the theory is, to quote the words of the late Professor Bateson (10), who was the chief advocate in Britain, that 'the bird can be no longer looked upon as one individual whole, but it must be regarded as an aggregate of diverse factors. . . . Since the different characteristics depend for their development on the presence of different factors, the purity of a bird is not a collective quantity, but one which must be separately considered in respect to each of the several factors on which the characteristics of the breed depend.' That much, so far as externals are concerned, is an accession of knowledge, and is of value to breeders of pure stock, both for the perfecting of existing and the evolution of new races. The suggestion is made that the factors referred to exist in the female ovule and the male element which fertilises it, otherwise these would not appear in regular sequence in the progeny. A considerable amount of research has been and is being made to determine how far what are known as the productive qualities, that is, the capacity for eggs and flesh, arise in the manner indicated, and whether such can be increased; also the extent to which environmental influences and food contribute to these results. It is found that certain characters exert themselves more or less powerfully, to which the terms 'dominant' and 'recessive' are applied. These terms are explained by Professor Bateson as follows (10): 'When the character is due simply to the absence of any modifying factor there can be no mistake. . . . Such characters are called "recessive." Characters which are due simply to the presence



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of some factor are called "dominants," in contradiction to these recessives.' For example, white skin is said to be dominant to yellow, and the fifth toe also to four toes ; so that when two birds are mated, one a possessor and the other not, of either quality, the great majority of the progeny will follow the former. It is not possible as yet to surmise how far this theory applies to productive qualities, though many claims are put forth in that direction. Where the danger lies is that for application of the Mendelian theories the progeny must be closely inbred, often mating brothers and sisters in successive generations. Where there is drastic elimination of the less fit and in the hands of skilful breeders, the ill-effects may be minimised, though not altogether obviated. We here have an explanation why biologists discount the opposition to close breeding, for without that practice Mendelism is non-existent, so far as breeding stock are concerned.

### SEX-LINKAGE.

By the mating of a male bird with gold or red plumage with hens with silver plumage the sex of the chickens so bred can be distinguished immediately after hatching. All the male chicks will be silver, and the females gold. That has been known for a long time to experimenters generally. From the fact that there did not appear to be any practical value in this knowledge it has been regarded as of interest and nothing more. With the growth, however, of commercial Poultry Husbandry for egg-production, and the more general keeping of light-bodied fowls such as the Leghorn, especially as breeding for high fecundity has resulted in diminution of size of body, together with the essential necessity for avoidance of waste, the male chickens have been looked upon as a source of loss. To feed them to a killing age is regarded as so much waste. The return received from the sale of these birds, notably young cockerels of the lighter breeds which are small in size of body and poor in flesh qualities, often does not pay the cost of feeding from hatching to killing. Where the race or breed is good in flesh properties, these small cockerels if fed in a suitable manner can be sold profitably as milk chickens at a very early age, usually weighing 8 to 12 ounces, as upon the Continent of Europe. In America pro-

ducers have adopted a system of fattening which have so improved the quality of the lighter-bodied breeds as to prevent the loss referred to. A few examples are to be met with in Britain where that process has been followed. That is the way of truest economy, whether it be by selection of such breeds as possess meat qualities, or by feeding the cockerels off as soon as the sex is discernible, which, in the lighter races is evident very early. Sex-linkage implies crossing. Its chief danger is in sacrificing the purity of breeds, even though pure-bred stock are necessary for its success, which has been the foundation of progressive poultry husbandry in all countries, following upon the teachings of Nature. The breeding value of the birds thus crossed is lost, and the absence of uniformity in colour in itself is an important factor.

In advocacy of this system Professor Punnett says (9): 'If he (the breeder) crosses silvers of any breed with a gold cock of another breed, he will have no difficulty in distinguishing with certainty between his cockerel chicks and his pullets on hatching. Moreover, by mating his flock of pullets for egg-production in this way he will gain the advantage of the increased hardiness and quicker growth which so often result from suitable crosses. He should be careful, however, in the light of Pearl's work, to choose his gold cock from a strain of high egg-production, whether it be a Rhode Island Red, a Brown Leghorn, a Buttercup, or anything else. It is not, of course, suggested that the first-cross pullets should be bred from. Their function would be in the first place to produce eggs, and secondly, when they cease to be productive, to take the place of their slaughtered brothers in providing meat. It would be essential to preserve the pure strains, though in diminished numbers, in order to keep up the supply of parents for a succession of first-cross utility birds.' As a general question it is scarcely to be expected that a system which necessitates the killing as soon as hatched of half the chickens thus brought out, and losing all potential values, and that disregards the breeding values of the more prolific hens, is likely to commend itself to those engaged in this branch of food production. Further it would involve elimination of all the pure white and many of the black-plumaged races, which comprise some of the most prolific of all fowls. These self-colour breeds have much to recommend them in that there are no complex colour complications.



The best known races for sex-linkage in respect to egg-production are : *Golds*—Brown Leghorn, Gold Campine, Gold Braekel, Gold Wyandotte, Partridge Wyandotte, Rhode Island Red, Red Sussex ; *Silvers*—Duckwing Leghorn, Exchequer Leghorn, Light Sussex, Barred Rock, Silver Campine, Silver Braekel, Silver Wyandotte, Columbian Wyandotte, Ancona.

### MATING.

In the following chapter will be discussed the relationship of external characters to internal qualities. Of equal importance is the relationship of the sexes in order to produce the purest and most productive breeds and varieties. Purity of race is the essential factor for the perpetuation and improvement of all classes of stock. Nature is always striving to fix type and colours suited to the environment, and in doing so makes use of the variation which is always present even though dormant to some extent. To take an example from other stock (11) : ' It has been said that if a flock of sheep were divided into lots, and each lot sent to different parts of Britain, and kept from interbreeding with other kinds, each would, in the course of a few generations, develop points and peculiarities which could easily be accentuated by selection only, and thus breeds be manufactured altogether different from the original strain and from each other.' Mongrelism spells degeneracy ; properly selected pure races have enhanced production in every country. Our truest method of insuring success is to select races which are suited to our conditions and to the object we have in view.

In the composition of a distinctive race or breed there are many factors, such as conformation, length of limbs and neck, the secondary characters such as comb, degree of feather development, and size. Coloration of plumage is distinct from the former, and determines the variety of a breed, not the breed itself. What is known as type may be as rigid as we can make it, even in respect to what are minor differences. That, however, is in accordance with natural evolution. The Arab horse and the Russian pony are of the same species, and will interbreed, but differ in type or character. In every breed the essen-



tial factor to secure its perpetuation and improvement, is to define the type, to clearly recognise the combination which distinguishes it from other breeds. In such combination what are minor differences are included. In association these form a type, which can be recognised. Individually all these characters are found in other races. Square body, full breast, large wings, shortish legs and neck, medium comb, and five toes on each foot, combine to make the Dorking. Change or absence of any would destroy the type. It would not be a Dorking. Hence type stands in the frontal position of all breeding.

Exhibitors and those concerned in production have each erred in disregarding the balance of character and type, the former by concentration upon coloration of plumage, limbs, etc., and the latter by devoting attention to productivity, as a result of which the type may be entirely changed. Excess or extremes are usually harmful. In so far as external characters are concerned Nature teaches us the importance of purity of race, and that colour in the males is usually a fixed quantity. In nearly all birds the males are bright in plumage and very uniform in colour, whilst the females are much more homely and often very variable. The richer hues of the males appear to be maintained by selection on the part of the hens. The handsomer the male the more attractive he is. The difference of the two sexes in coloration is protective of the females. They are less liable to be seen by enemies when upon the nests if dull in colour. Their mates protect them by drawing attention to themselves, and are better equipped for fighting. What is here stated does not apply to self-colour races, that is, black or white or buff. In the brightly-hued coloured poultry there is great variation in the body colour of females. This is indicated in Game fowls. Mr. F. C. Tomkins, in dealing with Black-red Game says (12): 'It is, in my opinion, useless to describe the colour of hens to be used for cockerel breeding, or the colour of cocks required for pullet breeding, unless we know how they are bred, as the produce might be quite different.' The present system of adopting fixed colour standards, and fixed markings, for both males and females is a serious blunder, against natural laws, and leads to double-mating, so far as exhibitors are concerned.

## DOUBLE-MATING.

As already indicated, in the self-colour races standardisation in both sexes is comparatively simple. With others the attempt—it cannot be regarded as successful—to fix colours for hens as well as males, necessitates what is called double-mating, that is, distinct mating for each sex if prizes are desired in the show pens. Our firm opinion is that whilst standards for males of these breeds can be maintained, such is impossible from the same pens for females. Colour in the cocks is important, and may indicate virility, when combined with the general characters. In the hens type should be supreme, and permitting a wide range of colour variation in the plumage. Therefore, standards which insist upon pencilling, lacing, spangling, and chain-mail in hens, are not only a mistake, but have done much to militate against the popularity and usefulness of colour breeds. It explains why many breeds have lost favour, and are kept only by the few who can afford the luxury of two pens instead of one. Where adopted there are in reality two breeds or varieties and not one. Any mating should produce both typical males and females.

## NEW BREEDS.

The introduction of new breeds and varieties, whether created or imported, has done much to popularise Poultry Husbandry. It is, moreover, a necessity. With a rapidly-reproducing species, when bred under domestication the rate at which its vigour and stamina are liable to become exhausted is accelerated. Forms of life, or varieties of these forms, tend to exhaustion after a period of time, which may be tens or hundreds of years. Then they seem to work out. Geological records indicate that this is a universal law. If we are to keep poultry to the fore there must either be a succession of new breeds or varieties, or out-crosses to impart the strength which artificial selection and unnatural conditions reduce. These infusions of fresh blood, however, have in many instances the result of modifying external characteristics, and, in some cases of producing new breeds and varieties. Therefore, every encouragement should be given to in-



crease the number of these, many of which may fail to justify themselves. The few that stand the test of experience, both as regards characters and qualities, will be ready to take the place of others that have served their purpose. It is notable that the most popular and valuable breeds of poultry at the present time were unknown or had not been evolved fifty years ago, whilst those which were then popular are kept to a very small extent or have disappeared.

## SUMMARY.

(a) That the four species of domestic poultry, namely, fowls, duck, geese and turkeys are distinct and do not interbreed.

(b) That there is a constant tendency to variation, due, in the first place, to change of environment, and that varieties indicate differences in colour, the type of a breed remaining the same in all.

(c) That there is a constant pull-back towards ancestors, and which has to be kept in view by the breeders.

(d) That the two parents exercise specific influence upon the progeny, but cannot be absolutely defined.

(e) That coloration of plumage is largely due to climate and natural conditions, and is largely protective.

(f) That no method of influencing the sex has been discovered.

(g) That for development of characters or qualities the most rapid and effective method is pedigree breeding.

(h) That in-breeding and line-breeding are the same, only differing in degree of intensity.

(i) That Mendelism has not yet proved of practical value to those engaged in breeding of poultry, but is deeply interesting as a scientific study.

(j) That Sex-linkage enables the sexes to be distinguished as soon as the birds are hatched.

(k) That the adoption of fixed standards for both males and females is impracticable in colour races, and has led to the evil practice of Double-Mating.

(l) That the introduction of new breeds is to be encouraged. In this way future needs are anticipated.



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CHAPTER XV  
CHARACTERS OF POULTRY  
AND THEIR VALUE.





## CHAPTER XV

### CHARACTERS OF POULTRY AND THEIR VALUE.

The relationship of external characters to the economic qualities is a subject to which a very limited amount of attention has been given. It is, however, a question of fundamental importance, more especially as the exhibitions system has concentrated mainly upon such characters. There are those who have condemned exhibitions entirely, regarding the methods of breeding adopted in the development of high class exhibition stock as tending to degeneracy. On the other hand, there are those who claim, and with justification, that the progress made in any branch of stock is greatest where exhibitions have been held, and, further, that the quality, even productively, attains its maximum where shows have been established. That such is true cannot be questioned. We have had the opportunities of studying this aspect in many countries and of observing the stock in detail. The conclusion, after the experience of many years, is that exhibitions have contributed powerfully in extension of the popularity of Poultry Husbandry, and of influencing the class of stock kept in the respective districts. That many mistakes have been made by exhibition breeders is evident, and their vagaries and striving for abnormalities have been harmful, is apparent. The gain, however, is much greater than the loss. The improvement of existing breeds and varieties, and the introduction of new races and forms, has been largely due to exhibitions. In this regard it is well to remember that the pleasurable or recreative breeding of fowls is of importance, though not so wide-spread as breeding for food production. In all branches there is a need to avoid extremes, and to preserve the balance between the external and the internal.

## STANDARDS.

External characters are in large measure the expression of environment in the first place, in which protection is a leading factor under natural conditions. Artificial selection, that is, breeding for specific points, is almost entirely based upon natural variations. Type of body, coloration of plumage, of legs, and of flesh, are largely conditional. The adoption and extension of merely arbitrary characters have no economic value, and, generally speaking, are not related to the productive qualities. If carried to an extreme, they have in many instances reduced or destroyed the value of poultry in its practical aspect.

It is essential, therefore, except in the purely ornamental races of poultry, that external characters should be in sympathy with internal qualities. The sacrifice of economics for purely fancy characteristics does not pay in the long run. The bulk of breeding of poultry is practical. So soon as the exaggeration of externals reduces the productivity, or reduces the constitutional vigour, popularity declines, demand falls off. With a rapidly reproducing species like poultry there is a considerable tendency to exhaustion, which explains the displacement of breeds which formerly attained great favour.

There is no reason whatever why there should be an antagonism between the external characters and internal qualities. Such is not the case naturally. We must, however, remember that the main difficulty arises from the fact that the chief value of wild animals and birds is by reason of their flesh properties, and at limited seasons of the year, whereas under domestication in these later days the demand for eggs as food has grown far beyond that for flesh, with the result that artificiality has been developed to an even greater degree than for exhibition. Nature's object is reproduction, not production. In that the exhibitor is closer to what is natural than the egg farmer. Standards should, as far as possible, give prominence to those points which are in unison with economic properties. This is of supreme importance. Many of our most popular breeds first secured attention by reason of the fact that they were exceptionally good layers, or high in flesh development, or maintained a good balance in either direction. The



mistake which has been made by those who have been responsible for the drafting of Standards is in disregarding economic or functional properties, and considering external characters alone. To some extent, a change has been made in the direction of keeping both objects in view. The main danger now arises from concentration upon productivity, and ignoring the racial characters.

### STRUCTURE OF BODY.

That functional and organic activity have an influence upon structure and muscular development is evident. To what extent this is individual or may become inherent is problematical. In this respect it may be assumed that capacity and capability are unequal. All poultry possess a greater degree of capacity than is immediately capable of development. It is, therefore, desirable to inquire how far we can form a judgment as to capability by the shape, structure, and general conformation of each individual, presuming that these are in accordance with the general type of the race. In this respect a merely mechanical grading, working with precision, cannot be expected. We are dealing with living creatures in which the elements of variations are always active, and which are influenced by their environment. General experience indicates that functional development is in correlation with general appearances. The signs which distinguish meat breeds of cattle from dairy stock are recognised, though in the latter there are great differences in the milk yield. The same is true with poultry. As a general guide in selection there are indications of service to the breeder, though these may not be absolute. The most we can expect is that in this manner capacity can be discerned. The capability will depend upon other influences.

The object of those who are breeding high-class table poultry is to secure an abundance of breast meat, as that is finest in quality, with as little as possible on the thighs. This is attained by expansion of muscles which lie upon the sternum. Invariably is this associated with large wings, even if breeding for large size of body reduces ability to fly. The flesh on both sides of the sternum forms the motor muscles of the wings. On the other hand development of the laying powers of



a hen leads to enlargement of the egg organs and muscles, which need greater space for their exercise. On this question Darwin says (1) : 'Increased use or action strengthens muscles, glands, sense organs, etc.; and disuse, on the other hand, weakens them. . . . The flow of blood is greatly increased towards any part which is performing work, and sinks again when the part is at rest. Consequently, if the work is frequent the vessels increase in size, and the part is better nourished.' As the egg organs of a fowl must necessarily lie in the posterior part of the body, where these are highly developed it is found that the region is large as compared with breeds or families greater in breast muscles. The posterior part of a hen is necessarily greater than that of a male bird. She has egg organs, which he has not. At the same time the structure of a male of a highly productive breed, or that of a full-fleshed breed, conforms to the type of the race. A further point to be noted is that in heavy laying breeds the legs are set well apart to give play to the egg organs.

A method of applying what is here stated to practical use is by drawing a median line through the centre of the body, from where the neck separates from the body, to the legs. If the greater bulk of the body lies in front of this imaginary line, the fowl can be classed among the table breeds. Its position therein will be determined by the extent of its development, plus the quality and flavour of flesh. If the greater bulk of body lies behind this median line, that indicates capacity for laying, such being determined by the depth and width. It does not, however, prove capability. Some of the more important breeds, largely of the Asiatic type, have an outline represented by the letter Y, or the letter U slightly raised. There is an almost equally balanced size of body upon each side of the median line. These are included in the Dual Purpose breeds, that is, they do not excel either as layers or as table fowls, though they may be good in each quality. An interesting and important point is that if, as a result of selection or conditions, there is a change in egg-production or flesh properties, this is indicated in the structure. Further that excess, namely, an extreme development in one direction is accompanied by declension in that which is opposite. No breed or individual which has high capability as a layer is a first class table fowl, and vice versa.

The method of lining indicated above represents the capacity.

It does not give an assurance of capability. Many attempts have been made to discover some system by which the production may be foretold. The much boomed handling and finger measurements between the keel and pelvic bones, though having a basis of fact, are unreliable in practice as a method of selective breeding, which must be based upon performance, plus capacity, and not upon empirical anticipation which does not, and cannot, take into account the many factors that are involved.

### SIZE OF BODY.

There are two aspects of this question (1) in relation to production, and (2) to size of egg, both of which are important in respect to those races which are economic. So far as the Ornamental Breeds are concerned it is of no moment.

*Production.*—In moist, temperate countries the tendency is in the direction of greater size of body. That may be attributed to climate, and to abundant feed of a nutritious nature. Under such conditions selection follows the natural process. It is often carried too far. Even in table poultry (although with these ultimate size must be considered, as “per pound” is frequently the selling standard) the largest are not the best, that is, those which are biggest in frame, for that means heavier bone. What is required most of all is a capacity for rapidity of growth, and responsiveness to the fattening process. Big-boned birds are expensive to produce, and the flesh is usually coarse. The weight of meat in relation to the bone and offal determines the value, not the total bulk.

Increase in size of body much beyond the average of the race is usually accompanied by greater inertia and less functional activity so far as the egg organs are concerned, as well as heavier bone. For egg-production experience shows that, as a rule, those birds which are most prolific are below the average of the race, and even of the species. Much has been done to develop the fecundity of some families of table and dual purpose breeds, and high individual records have thus been attained. That, however, has been in the case of birds which were less in weight than the average. If continued through several generations there is a further loss in size. It is an uncontrovertible fact that



the breeds which have maintained for a long period of time the front rank for number of eggs produced by them are small or small-medium in size. The best layers are small, compact, and carry no surplus of flesh. That is also true with milk cows both as to breed and individuals. In one of the British Laying Trials the leading pen of White Leghorns were nearly 31 per cent less in weight than the pen which was last in the competition, and the last pen of White Wyandottes was nearly 43 per cent heavier than the winning pen. The differences were not so great with the dual purpose breeds where the average productivity was lower.

One of the most serious questions, from a breeding point of view, has been the dwarfing of families or strains of the more prolific races of fowls and ducks, so much so that some of these birds are weedy in the extreme, little better than Bantams in size, and without the uniformity in conformation of the latter. Everything has been sacrificed to number of eggs, to which end pullets have been brought into lay at an early age long before maturity was possible, they have been mated in their first year when exhausted by a long period of production, and their progeny have lost in vigour as a result. Whilst it is certain that the best layers will be those which are on the small side, it is essential that, even if there has to be some sacrifice in the number of eggs, an average size of body must be maintained so as to preserve the balance. Trap-nesting is not breeding.

*Size of Egg.*—The egg in respect to size does not follow that of the hen's body. With exception of the Dorking, all the larger breeds and varieties of fowls lay comparatively small eggs in relation to the body weight. Some of the largest-bodied fowls, notably, the Brahma, the Cochin and the Cornish, produce small, though very rich eggs. The largest are laid by races which are small or medium in weight of body, namely, the Minorca, Andalusian and the Braekel. The turkey hen lays a comparatively small egg, very little larger than that from many fowls, though the body weight of the parent is two to three times that of the fowl. Very large eggs do not contain a relative increase of nutriment. Size, however, as a marketable factor must be considered. With loss of body weight indicated above as a result of high fecundity there has been a distinct decrease in the size of eggs produced, more especially under more intensive conditions. That may be coun-



teracted to some extent by selective breeding, as will be shown later, though not wholly so.

### CONSTITUTIONAL VIGOUR.

The forces and influences which are at work militating against the maintenance of physical vigour and functional activity, though the latter is sometimes temporarily present to a degree when the former is absent, are many and varied. The questions involved are of supreme importance to every breeder and producer, whatever the scope of his operations. In this direction there has been a distinct retrogression wherever more intensive methods have been adopted, as indicated by embryonic and post-hatching mortality; by the greater virulency of disease of various forms; and by loss of resistance at all periods. Some suggestive observations have been made at Cornell University which bear upon this question (2). Flocks of White Leghorns and Plymouth Rocks proved so unequal in growth that they were divided into strong and weak. It was found (a) that in all cases the weaker birds consumed more food per dozen eggs produced than the stronger; (b) that the number and value of eggs produced and the profits made were greater from the strong flocks than the weak; (c) that the mortality in adult birds was, in the main, greater in the weak than the strong; and (d) that the percentage fertility of eggs, of chickens hatched, weight of chickens when hatched, and of chickens living at the end of six weeks, were in favour of the stronger birds. Such data is confirmed by practical experience. The loss as a result of mortality in young and old stock is greater than is generally revealed, and is an appalling tax upon Poultry Husbandry.

With regard to external evidences of constitutional vigour, the following is commended to careful consideration: (3)

‘The bird of high constitutional vigour will have a thrifty appearance, with a bright eye, and clean, well-kept plumage. The head will be broad and relatively short, giving in its appearance plain indications of strength. It will show nothing of the long-drawn-out, sickly crow-like appearance of the head which is all too common among the inhabitants of the average poultry yard. The beak will be relatively

short and strong, thus correlating with the general conformation of the head. Comb and wattles will be bright in colour and present a full-blooded, healthy, vigorous appearance.

‘The body of the bird of high constitutional vigour will be broad and deep and well meated, with a frame well knit together, strong in the base, but not coarse. In fowls of strong constitution and great vigour all the secondary sexual differences will usually be well marked ; in other words, the males will be masculine to a degree in appearance and behaviour, and the females correspondingly feminine. It must be noted, however, that this last is a general rule to which there are occasional exceptions.’

To what is here stated may be added activity of habit, alertness of vision, capacity for foraging, and, in the case of males, chivalrous attention to the females, with pronounced ability in respect to defence, even to the extent of pugnacity. Tameness, so far as strangers are concerned, is a species of cowardice and an indication of degeneracy. It may, however, be pointed out that, in the table breeds of poultry of the higher grades, the constitutional vigour is not so great as with the egg-producing and general purpose races.

The practical breeder of poultry should, first of all, make his selection in respect to constitutional vigour. No bird about which there is the slightest doubt should ever find access to the breeding pen ; the second consideration is suitability in accordance with the object he has in view, whether exhibition, or eggs, or flesh ; third, suitability of the breed or stock to environmental conditions, and, lastly, type and external character. We should aim for simplicity in breeding rather than for complexity, and reduce the number of selective character rather than their increase. ‘The breeds in which many requirements have been exacted contemporaneously have had a chequered history, full of ups and downs, and the end is not yet—nor will the end be in sight until the custom is abandoned of requiring at the same time so many points as to put the matter beyond the range of practical solution.’ (1). Exaltation of existing and introduction of arbitrary points have ruined several breeds, and injured others.



## PLUMAGE.

The outer covering of birds consists of feathers, which serve two purposes, namely, as a covering to the skin, affording protection and warmth to the body, and as organs of flight. The last-named point is referred to later. It should be remembered that the skin of birds is much thinner than that of hair-clad animals, is less protective, and is devoid of the usual glands. Change of conditions has a marked effect upon the plumage, in colder latitudes becoming thicker and more abundant than in a warm climate, due to the fact that the thickly clad fowls are better able to withstand low temperatures. Here, again, is an exemplification of the law of 'survival of the fittest,' and explains why some races of poultry thrive in cold, exposed districts to which others are unsuitable. Activity of habit and vigour of constitution mean much in this direction. It is found, however, that the heavier-feathered races of poultry are naturally better winter layers than those which are lighter in that respect. Feathers are of small economic value, save in so far as these are essential to enable the birds to attain the object for which they are kept. That they are the most expensive part of the body to produce appears to be unquestionable. With more abundant plumage growth is slower, and amount of food consumed is correspondingly increased. The more active races are usually tight in feather. With a lethargic temperament we find soft and more abundant plumage.

## COLORATION OF PLUMAGE.

Very little is known as to the cause of variation in colour of plumage. Soil has a rapid effect upon colour of legs and flesh, and it may be assumed that feathers are affected in the same manner. Mr. Primrose McConnell mentions (5) that the colour of the Cleveland Bay horse may be due to its having been bred for centuries on ironstone soil, and that the wool colour of sheep is influenced by the land upon which they are bred. It may be accepted that the effect of soil in the colour of plumage is indirect rather than direct.

The primary colours of the domestic fowl are four—red, black,



yellow and blue. White is not a colour. In fowls it may be due to absence of pigment, that is, albinism, or to a combination of other colours, namely, a strong white on a dark ground. All the colours seen on domestic poultry are composed of the above, subject to many variations in shade of each. Among self-colours, blacks and whites are the most numerous; yellow (or buff) and blues (or slate) are difficult to obtain and maintain; and of reds there are two races, namely, the Red Orloff and the Rhode Island Red, in both of which a considerable amount of black is present. The majority of poultry have a mixture of colour in their plumage.

There is a constant tendency to variation under natural conditions, which appears to be increased when these birds are domesticated. The fixing of colours and types is the result of conformation to the environment, as the birds are less easily seen by enemies, and are thus preserved whilst others are destroyed. Soil and food also influence coloration, as do light and darkness, heat and cold. Animals and plants bred and produced in darkness are deficient in coloration, whilst all the richer-hued species under natural conditions are found in the torrid zones. In the Arctic regions there is an almost entire absence of colour in animal life, partially due to the protective influence mentioned above, but also to the lack of atmospheric heat. Coloration may, therefore, be regarded as a result of environment and of food, at which point the question must be left, as knowledge on the subject is incomplete.

In order to maintain purity of race coloration of plumage must be given a place. The mistake, however, is the making of it supreme to other considerations. Such is the tendency in breeding for exhibition. For example, a sound-coloured Buff Orpington or Rhode Island Red may be worth as many English pounds as another, less perfect in that respect, yet superior in productive qualities, is worth pence or cents. The exhibition breeder, desiring the pounds, sacrifices the latter merits. Not only so, but he eliminates the more productive and the sports, as shown by so-called mismarked feathers, retaining the highly refined, which are often the weaker. Variations are frequently the expression of dormant qualities which would stop the tendency to decadence. As Darwin says (1) 'Man always tends to go to an extreme point in the selection, whether methodical or un-





HEADS OF FOWLS  
(By courtesy of "The Poultry World, London")



conscious, of all useful and pleasing qualities.' Colour of plumage is part of the whole, but only a part, and selection in that respect should not be too rigid. Buff tails in buff breeds may be pleasing in appearance, but are unnatural, and the birds with black tail are more vigorous and should be preferred.

The cause of leg and foot feathering, in some races very heavy, is unknown. These are ornamental, and do not appear to have any relation, except adversely, to productive qualities. The size of tail is arbitrary in domestic fowls, where a rudder for flight is not required. The hackles vary in accordance with the general feather development.

### COMB AND WATTLES.

The head of nearly all races of domestic poultry is ornamented with flesh enlargements, varying greatly in size and shape. These consist of what is called the comb, that is, a fleshy growth above the crown of the skull, and of the wattles, usually double, which hang below the jaw or lower mandible. Combs differ considerably in size and shape, and are larger in the male than the female. The shape of comb does not appear to have any meaning. Economically combs and wattles are of small value. In some countries they are cooked for human food, making a palatable dish when skilfully prepared.

There is an evident correlation between the combs and wattles and the reproductive organs. In the males the comb is largest during the breeding season. When a hen is about to commence laying and whilst she is in profit, it is large, firm and bright. So soon as she ceases production it shrinks and becomes comparatively dull. Further, during the growing stage the comb indicates the time of puberty. Races in which the comb shoots early are those which come into profit soonest. The correlation, therefore, between the comb and economic property is important.

All the most prolific races of fowls have large combs, and any increase in the fecundity has the tendency of increasing size of combs. We do not, however, ignore the fact that a few of the moderate layers have large combs, though not in relation to the size of body, as in the case of the Dorking. What would be large in a Leghorn would be

medium on a Dorking. The comparison must be with the body. It should also be remembered that a rose comb is larger than it appears, though not so prominent as a single comb. The tendency to rose or flat combs in very cold countries is marked. These are less liable to frost bite than are single combs, as the blood appears to circulate more evenly.

In some breeds exhibitors have carried size of comb to an abnormal extent, notably, in Minorcas, Leghorns, Andalusians, Wyandottes and others. In doing so they have done much harm, and have deteriorated the appearance, as well as imposed a strain that has proved injurious. Mr. T. Henry Thornton writes (6) of 'birds with combs that hang down four or five inches below the level of the wattles, completely rendering useless the eye on that side, and burdening the poor victim with an appendage which is neither useful nor ornamental.' Many years ago when this practice was most pronounced Mr. Lewis Wright (7) suggested that the result was that 'The hen or pullet is practically blinded on one side, and in both sexes the weight is too great for the brain, causing brain fatigue and often headache, which exhausts the nervous energy and so impairs the sexual vigour.'

In all Nature there are reactive influences at work with the object of preserving a balance and preventing excess. Large combs appear to be associated with high fecundity. When increased beyond a reasonable point a reverse influence becomes potent. It may be stated that on single-combed fowls the height from the base to the extremity of the longest spike should not exceed twice the length from the centre of the eye to the tip of the beak. Thus if the latter is 2 inches, the former should not exceed 4 inches. In rose-combed fowls the height of comb should not be greater than the width, and the latter be the same as that of the skull.

The comb, also, is indicative of flesh qualities, not by size but in respect to fineness of texture. A coarse comb indicates coarse flesh. In selection of breeding stock for market chickens it is all important that birds with a neat, fine, smooth comb be selected, and not one that is large. The comb is also the barometer of general health.

With the breeding for increased size of combs, and also as a result of development of high fecundity, it has been found that very big combs in male birds lead to loss of fertility, sometimes to a serious



degree. The effect in hens mated for breeding is less evident, although it is undoubtedly present. It has become a general practice among commercial egg farmers to dub their heavy-combed breeding males. Not only so, but with the adoption of mass-breeding, that is, large flocks of hens with several males, the doing so prevents much of the suffering which would otherwise be caused by fighting and tearing the combs and wattles. Dubbing, that is, cutting off these fleshy protuberances, was universal in the days of cock-fighting, for obvious reasons. For exhibition that system has been continued in Games and Game Bantams, even though there is no justification as it was merely thought to improve the appearance. In Britain dubbing is illegal as declared in the High Courts of Justice, when the actual operation can be proved. To own a dubbed bird, so long as the wound is healed, whether for exhibition or breeding, does not make the owner subject to penalty. Whether the fact of dubbing being necessary for the service of mankind, as in the case of castration of stallions and bulls, comes within the exceptions permitted by law, is uncertain, and there is no judgment in support of that contention. There is no doubt whatever under modern systems of breeding that large-combed birds are often unsatisfactory for breeding, and that dubbing becomes essential. Large combs appear to be inseparable in some breeds from high fecundity. The cutting of combs and wattles, if skilfully performed with sharp instruments, entails very little pain to the birds, who are often saved much suffering in other ways. Skinning the neck, as adopted for exhibition birds to give the appearance of long head, is a barbarous practice, and should be sternly repressed, more especially as there is no advantage in doing it so far as the male birds are concerned.

### BEAK AND BILL.

The beak in fowls and turkeys and the bill in ducks and geese are distinctly correlated with the economic properties. Nearly all the yellow-fleshed and heavy egg-producing races of fowls have a yellow or horn-coloured beak, sometimes darker on the upper side, whereas the white-fleshed races, those in which the meat qualities are supreme,



have either a white or a dark beak. Consequently the breeder will find it advantageous to keep this apparently minor point in view, as it is not merely an arbitrary standard in breeds. The colour of flesh varies in different countries. In Europe white is preferred ; in America yellow, though in the latter respect a change appears to be taking place.

In ducks and geese white flesh is associated with flesh or dark-coloured bills. With the Aylesbury the ideal of the bill is that it should be the tinge of a lady's finger nail. The Belgian view is that blue bills with a white bean or tip accompany the finest quality flesh. Yellow bills, as found in English Pekin ducks, are associated with yellow flesh. The same is seen in geese, where a light horn-coloured bean in the bill is regarded as an indication of quality, except that in the Embden creamy-white flesh is met with and orange-colour in the bill.

#### EARLOBE.

In the original fowls, and those which are bred under normal conditions without any attempt to enhance the fecundity, the earlobe, that is, the bare disk of flesh forming what is known as the deaf-ear, is usually red, as might be expected when the face is of that colour. Sometimes white streaks are evident, and in other races there is a creamy tint, following the colour of the flesh, and still others bluish-white. With greater egg-production there is an ever increasing tendency to white earlobes, and it has been suggested that these are indications of high fecundity. That may be fundamental or incidental. It, however, has yet to be determined. The fact remains that the best laying breeds have white earlobes, which have been adopted by exhibitors in these and consistently bred for, in some cases to an abnormal extent with the result, as in the Black Spanish, at one time a most valuable breed, that the face also becomes white, and almost everything was sacrificed to what was an arbitrary point. Experience has shown that birds showing red in the earlobe where white is called for by the Standards, are often hardier and stronger than those more perfect in that respect. Show birds are often kept in close confinement so as to bleach the earlobe, which treatment leads to enfeeblement.





TAILS OF FOWLS  
(By courtesy of "The Poultry World, London")



## CREST AND BEARD.

Ornamental tufts of feathers are found on the heads of many species of birds, and among poultry there is a strong tendency in that direction. There are several races of Russian fowls that have not been carefully selected possessing crests or beards. In almost all countries there are poultry of all kinds which display these features. Artificial selection of these variations has led to the development of crests and beards in such races as Polish, Dutch Crested, Houdans, &c. So far as we are aware these are purely ornamental, though it is suggested that crests, beards and muffs are a protection against frost bite, and that, therefore, poultry so decorated are preferred in cold countries. In most climates a crest is disadvantageous to any fowl. A very interesting development of the cranium is found in all fowls carrying a large crest. As a rule a very large-crested fowl has a small comb, which the late Charles Darwin said (1) 'seems always accompanied by a great diminution or almost entire absence of the comb. A large beard is similarly accompanied by diminished or absent wattles. These latter cases apparently come under the law of compensation or balancement of growth. A large beard below the lower jaw and a large topknot on the skull often go together.' There are exceptions to this rule. The Houdan has both crest and comb of considerable size. There are several breeds, notably the Faverolles, which are bearded but have no crest, and the Crested Dutch, which have crest and no beard. How far the crest is correlated to the comb we have no evidence, or that it is influenced by an economic quality in the fowl.

## WINGS.

Flying birds display greater development of the wings than of the legs; those which are heavy in body and walk more than fly are stronger and heavier in the bones of legs and thighs. In both of these forms the respective muscles are specially developed, and the opposite muscles weakened and decreased in size. The motor muscles of the wings consist of the flesh found upon the sternum or breast blade. Consequently with more powerful wings a larger amount of breast

muscle is required, and when the legs are stronger there is more flesh upon the thighs. Large wings mean well-developed breasts, and good table fowls ; small wings indicate a lack of flesh on that part of the body, and inferior flesh properties. Both forms can be developed by selective breeding.

### LEGS AND FEET.

The influence of soil upon the colour of the legs and feet of poultry, and also upon the growth of young birds, is very great. Such colour is an important indication of the flesh qualities. Without exception, white flesh and skin are correlative with white legs, white or grey flesh with blue or black legs, and yellow flesh with yellow legs. In European markets white-fleshed fowls and other poultry, with a few exceptions, stand first for human consumption, and grey-fleshed second. Yellow-fleshed, and legs corresponding, are, generally, the most prolific layers and are the hardiest, grey-fleshed second, and white-fleshed third, in the absence of special selection. In some European countries blue-legged fowls are regarded as the finest in the flavour of flesh which is white.

There is considerable variation in the length of leg in fowls, with much greater uniformity in ducks, geese and turkeys. The latter are less affected by selective breeding on abnormal lines. The Games and the Malay, with their great length of and heavy limbs, are at one extreme, with the Dumpie and the Courtes Pattes, having very abbreviated legs, at the other. Both have been bred for the result attained, the former for fighting and exhibition, the latter to prevent scratching in gardens, &c. The greater majority of fowls have legs of medium length, in conformity with size and weight of body. A Plymouth Rock has a much longer leg than a Leghorn, but is correspondingly larger and heavier in body, and needs to be so. That excessive length of leg is a mistake cannot be doubted. With it is accompanied a greater thickness of bone, a costly part of the body in time and food to produce. Lightness of bone means more rapid growth and early maturity, whether for egg- or flesh-production ; heavy bone means retardation of development, but ultimate enhancement of size. There is, however, considerable difference in the density of bone.



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In the better table breeds, although the legs may appear thick the bone is soft and porous and grows quicker than the hard shanks found on the general purpose breeds.

In a paper on the 'Relation of the Body of Fowls to their Fecundity,' M. Abozine states (7) that on examination of the skeletons of a large number of fowls he found that the relative weight of the dried skeletons to that of the entire living bird and of its edible parts is the same for all breeds, and the equivalent of 6 per cent. For a skeleton not dried the proportion is 8 per cent. The old theory, he says, that 'the more the bone, the more the flesh, is perfectly correct. Different birds of the same breed may have bone of variable thickness, but it is always in direct proportion to the quantity of flesh, of skin, and of feather. That is why the weight of the skeleton to the living bird is in all cases invariable.' It is evident that fowls carrying a large amount of flesh upon the thighs are heavier in leg bone than those which are more fully developed in breast. Hence the birds with large wings and breast muscles are quicker in growth than those with heavy legs.

M. Abozine states that (8) 'the weight of leg bone in Game fowls, in respect to weight of the entire skeleton is about 40 per cent, and the same proportion exists in the Cochin; in the Malay the proportion is 42 per cent; in Polish 30 per cent; in Dorking cocks 34 per cent; in Dorking hens 30 per cent; in Hamburgs and Bantams 26 per cent.'

In the great majority of breeds the number of toes on each foot is four, in some breeds, such as Dorkings, there are five, and occasionally six. These supernumerary digits appear to be of no value, except as an indication of descent. The toe-nails are usually of the same colour as the beak. Feathers on the legs and feet are associated with heavy bone.

### TYPE.

This term is generally used to denote the complete conformation. Every breed should be recognisable by distinctiveness in character and build from all others. In selection for breeding this is of the utmost importance. Colour of plumage does not enter into type, as



such type, not the colour, makes the breed, the latter of which indicates the variety of a breed. To describe type is difficult. It may best be explained as the combination of racial structure and development, giving an individuality to the family which distinguishes it from all others, even though there may be minor differences in members of the family. Into type enter shape, conformation, size, carriage, length of limbs, head points and feather covering.

### VOICE.

The voice of the species of bird, especially in the crow or call of the male, cannot strictly be regarded as an external character. It is important, however, as it is a revelation of economic quality. In Belgium cock-crowing matches are held for the purpose of testing which birds crow earliest and longest, and with a practical rather than a sportive object. The period at which a cockerel commences to crow is at the beginning of puberty, shown by the springing of the comb. The late Louis Vander Snickt called attention to this question some years ago when he said (9) that there 'is a vast difference between a cockerel at five or six weeks old, if it belongs to a medium, early maturing, laying breed, or to a large Asiatic breed. . . . When the chickens first come from the egg-shell the comb of the cockerel is always flat against the head ; when the chicken is dry the comb rises from the head. Some cockerels begin to crow early, say, at three weeks old. . . . The cock which is the most often disposed to crow is also the one that can control the largest flock of hens. . . . The more frequently adult cocks crow after being trained, the earlier their offspring cockerels crow and the pullets lay. . . . A cockerel will not crow before his comb is developed and red ; the comb does not become red before the interior organs are developed. There is an advantage in developing maturity as soon as possible, for the sooner the cockerels are matured, the sooner they will carry good flesh, and can be fattened and killed or caponised.' Crowing indicates early or later maturity. Early crowing tells of rapid development, that those intended for killing will be ready soon, and that pullets will come into lay quickly ; prolonged crowing means prolificacy in egg-production ; and retardation

of commencing to crow is indicative of delayed maturity, generally with increased size of body.

## SUMMARY.

(a) That Standards should, as far as possible, represent conformity of external characters with productive qualities.

(b) That the structure of the body is expressive of muscular development and of capacity for egg- and flesh-production.

(c) That in flesh breeds size of frame is essential to permit of a greater amount of muscle, especially upon the breast, and that in egg races the more prolific layers are those which are smaller in size.

(d) That size of egg does not follow that of the body, and is influenced by selective breeding.

(e) That Constitutional Vigour is of the utmost importance, and should stand first in selection.

(f) That coloration of plumage is a variable factor, having no economic value except that it is essential to purity of race and variety of race.

(g) That comb and wattles are directly associated with sexual development, and indicate productivity.

(h) That size of wings is to be regarded as proof of that of breast muscle.

(i) That length and strength of leg bones vary considerably, and are influenced by soil, food and natural tendencies.

(j) That the voice of the male, both as to time when crowing commences and number of crows, is determined by attainment of maturity, and indicates the prolificacy of hens of the race.

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